The Boston Medical and Surgical Journal

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June 30, 1921

Original Articles.

A MECHANICAL EXPLANATION OF THE SUFFERING WHICH IS ASSOCIATED WITH PROLAPSE OF THE UTERUS.

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Formerly Physician to the Woman's Room in the Out-Patient Department of the Massachusetts General Hospital.

Thirty-two years ago, Dr. W. E. Boardman, who died of pneumonia recently, made the remark to me that in his experience with womb troubles, he had observed that prolapse of the uterus, irrespective of any flexions or versions present, was the chief cause of suffering in the patient. This remark agreed with my own experience. At that time, I had charge of the Woman's Room in the Out-Patient Department of the Massachusetts General Hospital, where I was having the benefit of a very large clinic, and I had, myself, made the observation that prolapse of the uterus, among so-called displacements, was the predominant cause of suffering. My interest was therefore aroused to study the reason why prolapse of the uterus should cause such distress. After a time, I accumulated a few observations, as follows:

A prolapsed uterus which is giving rise to backache and pressure, distress and abdominal pain, usually appears with an enlargement and a congested condition of the body of the womb. When this condition is severe and has been in existence for some time, the uterus becomes tender to pressure, tender to ordinary examination, and to efforts toward replacement. Under such conditions, foci of inflammation of tissues adjacent to the uterus are apt to form. These foci are sometimes very tender and may result in adhesions, which resist efforts at elevation of the uterus. This congested condition of the womb and its annexes may be easily understood if we consider the blood supply through the womb. The vessels enter on each side of the uterus through the broad ligaments, and when the uterus is forced downward in prolapse, the vessels on either side are mechanically folded together against the side of the uterus. While this folding of the vessels does not prevent the entrance of arterial blood under cardiac impulse, it does interfere with the venous escapement of the blood, and results in a passive congestion of back-water pressure. The indication for this venous obstruction is the elevation of the uterus to a point where its circulation will be normal and free once more. In my own practice of restoring a prolapsed uterus, I have never used any instruments, but, placing the patient in the knee-chest position, I have gently pushed the uterus, without force,

from the pelvis toward the abdomen. If there was much tenderness present, or foci of inflammation to be felt, I employed hot-water injections to reduce the congestion and tenderness, and also used pledgets of lamb's wool saturated with glycerine. When the tenderness was sufficiently reduced, I inserted a small pessary to hold the uterus up. The large pessaries are liable to press upon neighboring parts and may cause trouble. One simply needs a small cradle, so to speak, to hold the uterus up where it belongs. Restoration of the circulation by this method is quickly followed by the disappearance of local congestion and the diminution of all subjective symptoms of pain and discomfort. The body of the uterus becomes smaller and firmer in texture; the tonicity of the ligaments attached to the uterus is restored and helps to hold the uterus in place. In the course of a few weeks of such support, the vagina, which, at the beginning, was relaxed and admitted a pessary of considerable size, shrinks in its circumference, and one is obliged to refit it with a smaller pessary. The disappearance of congestion and the cure of the subjective symptoms by restoration of free circulation, seems to be conclusive that the prolapse was productive of the venous obstruction described, and the cause of all distress.

To illustrate the mechanics of this condition in another way, I will remind you of an ovarian cyst. A small cyst may exist, so insignificant in size that it cannot be felt through the abdominal wall, and the patient may be entirely ignorant of its presence. Let that cyst be rotated half way round. There is now strangulation. The blood enters the cyst through the arteries but cannot escape freely through the veins of the twisted pedicle. A hornet's nest, stirred up with a stick, is symbolic of the peace of the simple life compared with the fury and hurricane that follows such a twist of the pedicle. Pain, suffering, interference with every function of the woman's body, quickly follow; bowels and kidney are almost put out of commission, while the tumor, or cyst, grows, and in the course of two or three weeks, may be found by the operating surgeon to weigh twenty-five or thirty pounds. It is adherent to everything near it, and its career has been a tempest of woe.

The other day, in a report of the Boston City Hospital, I noticed reference to an article by Dr. Clute, on, Torsion of the Spermatic Cord. I read the article with a great deal of interest, for it shows the association of torsion of the spermatic cord with that which I had been studying in connection with the uterus. A simple turn once around of the cord is enough to cause violent pain, swelling of the testicle, and a very severe condition of things, until an operation relieves the trouble.

On January 6, 1921, an article, by Dr. S. S. Dearborn, appeared in the BOSTON MEDICAL AND SURGICAL JOURNAL on, "Torsion of the Fallopian Tube," which further illustrated the violent results of an obstructed venous circulation. In these cases, untwisting is impossible; the only remedy is an operation, to undo the twist and relieve the distress. In the case of the uterus, however, we are lucky in being able to relieve the situation by simple elevation of the uterus and restoration of the normal circulation.

My thesis, therefore, is as follows: Mechanical obstruction to the escape of the venous blood from the uterus and the back-water congestion produced thereby, are as destructive to the health and function of that organ, as like obstruction is destructive to the other organs mentioned above.

When a woman has received a fall or been thrown or jarred in riding over rough roads, the condition of congestion does not develop instantly; it is not like a broken bone. She may not be conscious of the prolapse of the uterus for several days, until the congested condition described above has had time to develop. The following cases will illustrate my meaning:

A large, stout woman, weighing nearly 200 pounds, wanted to shoot the chutes. She took her place on the front seat of the sled. As you know, this sled comes down the chute with great speed, strikes the surface of the water, and the front end rises up and then falls back with a blow on the water that shakes the whole building. The woman, sitting on the front seat, received the full force of this blow. In about three days, she sent for me, and I found her uterus driven down into the pelvis, and she was in great pain. I placed her in the knee-chest position and put the uterus into place. She was perfectly well afterwards.

A young woman, 18 years of age, was standing on her lawn, when a dog ran behind her and knocked her feet from under her. She sat down with considerable violence. In a short

time, she began to suffer with pain and distress, and prolapse, with retroversion, was found. Her distress was relieved by lifting the uterus up, but was liable to recur at intervals. Sometimes she would pass several months in comfort; then the uterus would drop again, and pain and distress come on. Finally, she was relieved by an Alexander operation.

In 1877, a course of lectures on "The Mechanical System of Uterine Pathology" was delivered before the Harvian Society of London by Dr. Grailey Hewitt, Professor of Midwifery and Diseases of Women, University of London. The report of these lectures may be obtained at our Medical Library, for full description. Dr. Hewitt propounds the theory that the mechanical cause of the suffering in these cases is due to flexion of the uterus and nerve pressure at the seat of the flexion, which produces the pain and distress and other nervous reflexes which are associated with this group of diseases. I have not space here to properly present all his arguments; they can be found in the profusely illustrated article referred to above.

I wish, now, merely to call attention to this fact: In my cases, no attempt was ever made to change or disturb the condition of flexion which might be present. I never used any instrument to straighten out the flexion. I simply ignored it and elevated the uterus in the knee-chest position, with as little force as possible, largely depending upon gravitation to assist me. Moreover, the small pessary subsequently used to support the uterus could have no possible influence upon the flexion. The relief of subjective discomforts was always coincident with restoration of circulation as indicated by the behavior of the organs themselves. But the process of cure in these cases was also coincident with the diminution of congested enlargement, with retraction of relaxed annexes of the uterus, and with the ability of the uterus to retain its normal position and its normal circulation, unless thrown down again by some subsequent accident.

I have at present under my treatment three women, each about 80 years of age. They came to me with complaint of severe backache, inability to walk about and attend to their usual affairs. I replaced the uterus and held it at an elevation by means of the cupped pessary with a short, curved stem. This pessary, as is well known, is held in position by small elastic tubes passed through eyes in the lower end of the stem, and attached, in front and behind, to a band. These women are able to remove these instruments for purposes of cleanliness, and to replace them themselves, and when the uterus is thus held in position, they continue to perform their daily duties in comfort.

THE NEW SARGENT BODY-TEST.

By George Van Ness Dearborn, M.D., Cambridge, Mass.,

Boston City Hospital.

In *School and Society* for January 29, 1921, is the preliminary account of a new, simple, and single test of an individual's general motor efficiency, conceived and developed by Dudley Allen Sargent, "dean" of American physical educators. To every physician it is bound to be not only of theoretic interest but occasionally, at least, of much practical utility. The sooner it is generally known, tried out, appreciated, and adopted in habitual use, the better for all concerned. It seems to comprise a test of much in little time, much more, indeed, than any other single test known to the present writer. Let Doctor Sargent, for forty years so well known at Harvard, tell of his dynamic device in his own words (excerpted from the seven-page article):

"In popular estimation, it takes so many inches and so many pounds and a certain size chest girth to make a man, and this estimation is borne out largely by experience. Hence, the universal interest in the physical measurements of the human body. However, those of us who are engaged in making physical measurements of men by the thousand soon learn the limitations of the information which comes to us from this source alone. While it is true that the strength and functional capacity of a part generally increases with the size of that part, other things being equal, the number of cases where other things are not equal is so numerous that the generalization should be greatly modified.

"The measurements alone do not tell us anything of the texture and quality of the parts covered, *i. e.*, how much fat or bone, and how much muscle, nor do the measurements alone give us any information of the innervation of the parts upon which power and efficiency so frequently depend. Even if we accept the

physical measurements of a man as an indication of his potential power, so many of us almost intuitively do, we are soon taught by experience that *there is in many men an unknown equation which makes for power and efficiency which has never been determined and which can only be measured by an actual test.*

"The important question is, what is this unknown equation and how can it be simply and practically tested and numerically expressed? With a good many others, I have been wrestling with this problem for years by the way of strength tests, endurance tests, speed tests, etc., but have never come across any one that satisfied me or quite met the demands of the situation.

"It is said that every pioneer, or inventor, or discoverer, if he lives long enough, goes through three stages in his career. The first one is where his propositions are unfounded and absurd; the second stage is where, if proven true, they are not original; and the third stage is where they are so self-evident that any fool ought to have thought of them. I have now arrived at the third stage in my career, and want to share what seems to me the simplest and most effective of all tests of physical disability with the other fools who have been looking for one.

"I have dwelt at some length upon gravity as a constant force to be overcome and its relation to the height and weight and other measurements of the body. The new test that I offer consists of using the constant factors of height and weight which one always has with him, in a little different way than is commonly thought of. It is so simple, and yet so effective for testing the strongest man or the weakest woman or child, that one feels almost like apologizing to the general public for mentioning it.

THE NEW TEST.

"The individual to be tested stands under a cardboard disk, or paper box cover, heavy and stiff enough to hold its form, about twelve inches in diameter, held or suspended from ten to twenty or more inches above his head. He is then requested to bend forward, flexing the trunk, knees and ankles, and then, by a powerful jump upward, straightening the legs and spine, to try to touch the cardboard disk with the top of the head. Swinging the bent arms forward and upward at the time the legs, back and neck are extended, will be found to add to the height of the jump. When the disk has been placed at the highest point above the head that can be just touched in jumping, this height is measured. The difference between this height and that of the total stature is, of course, the height actually jumped."

* * *

If, then, in the new test, we multiply the total weight by the height jumped, and divide this product by the total height of the person in inches, the result will give a fair index of the effort made in the smallest number of figures. This is always an advantage in making a test and handling the data for statistical purposes.

Thus, if the individual tested weighed 150 pounds and jumped 20 inches above his head, and was 70 inches tall, the formula for his efficiency would be as follows:

$$\text{Index} = \frac{\text{Weight x Jump}}{\text{Height or stature}} = \frac{150 \times 20}{70} = 42.8"$$

Both as a reformed physiologist and as instructor in the physiology of exercise for the last twelve years in the Harvard Summer School (as well as elsewhere), the present writer has tried his humble best to see some theoretical fault with the Sargent body-test, claiming to be so much in so little even to almost the *proba optima* of human all-round dynamism. One looking for trouble usually finds it, and I am suggesting that this index should be in metric terms rather than in the clumsy and uncouth scale of our ancestors. Furthermore, the test, fundamentally a ponderal index, puts inexpedient eugenic premium on the short, stocky and over-weighted *format* of the human volume in contrast with the "Uncle Sam" type. Undoubtedly, it is to the former shape that real, unhyphenated, *i.e.*, permanent, Americans are rapidly tending, and this test would help to show them to be apparently physically superior—which hygienically and esthetically, humanly, speaking, they are not. By this test, the young, short, thick-set athlete shows his great superiority to the tall and thin, arthritic and sclerotic person at middle age, rather more than the ideal, hygienic status would warrant. Age hath its sanitary victories no less renowned than youth. But this, of course, is not primarily a hygienic test, nor does it claim to be. Lastly, there might be a light recording pen-lever attached to the head that would be self-recording and so less crude mechanically.

Aside from these really minor, because morphologic and accidental, implications, this test, in the language of the dormitory, "looks pretty good" to me. I am, probably, even a bit chagrined that so simple and comprehensive an idea did not seep down through my own archepallium.

This "stunt" not only measures the effective power of most of the essential muscles of the body (the so-called ambulatory muscles are two-thirds of all the muscle), and the person's mental and nervous dynamism ("pep" momentarily is the academic slang), but it automatically compensates differences both in weight and in stature in a remarkably perfect, scientific way. The fat man, for example, often makes a low rating, as he deserves to make; while the "wiry" woman (wiry in the physiological rather than the psychological, sense) makes a high mark as part of her reward of merit in denying herself the forbidden fruit of the chocolate tree, etc. The child and the senescent, the tall and the short, even the cardiopath and the pneumopath (if the index be done at once, repeatedly), are tested with equal accuracy. Quite the proper penalty is imposed on chronic arthritis, sclerosis, and "muscle binding"; and on clumsiness. And the abulic, the hysteric, the neurasthenic get the rating that would seem to belong to their enforced lack of dynamic endeavor.

The end of Dudley Sargent's preliminary report reads as follows:

"I think, therefore, that the test as a whole may be considered as a momentary try-out of one's *strength, speed, energy, and dexterity combined,* which, in my opinion, furnishes a fair physical test of a man and solves in a simply way his unknown equation as determined potentially by his height and weight. It will be observed that the parts tested, namely, the muscles of the feet, calves, thighs, buttocks, back, neck, anterior deltoid, chest and biceps, are the muscles most used in all forms of athletics, sports, track and field games, setting up exercises, posture drills, etc., and are of fundamental importance in all the active industries. For this reason, I think it should precede any other all-round physical test in basic value.

"In presenting this paper for discussion, I have intentionally narrowed myself down to a consideration of the factors involved in making the test, omitting the experience that has led up to it, and the application that may be made of it, and the method of conducting it.

"To those who wish to try the experiment, I would suggest that the jump be made in gymnasium slippers or, at least, in shoes with low heels, and as the factors, weight, height and height jumped are to be multiplied and divided in the calculation, that all the measurements be made with the greatest accuracy.

"If the test is of any value, then the standardization of it, and the collection of different data concerning it will, of course, be of the greatest importance, and follow naturally for the benefit of those who want to make use of it."

Unless my cortical synapses are worse awry than usual (which Æsculapius forbid), this test of the psychophysical individual at any moment has in it the simplicity-in-completeness indicative of "inspiration." None the less, the proof of this pudding, too, is in the eating thereof, unless and until caliometric measurement of the metabolism involved shall more promptly establish its comprehensiveness, as surely it would do.

Meanwhile, I understand that the suggestor of the test is arranging to give the public, and especially the medical public, early opportunity to try it out personally and to examine the data already accumulated (in part from the Harvard faculty) in the light of several other related circumstances. The procedure is a simple one and may readily and quickly be carried out in any physician's office. "Knocks and boosts" and other contributions would help to set the actual status of this new index of personal efficiency,—that is, on an empirical instead of on a purely theoretic basis. It is hoped that many will jump at the opportunity.

GOITRE.*

BY JOSEPH STANTON, M.D., BOSTON.
Visiting Surgeon, St. Elizabeth's Hospital.

IT is true that a goitre is any enlargement of the thyroid gland. The physiological enlargements of puberty and pregnancy are familiar to you all and are of no particular interest in this discussion, for it is with the surgical aspects of goitre that we are particularly concerned.

We may divide goitres into two classes, the

* Read before the South Boston Medical Society at its December meeting.

simple and the toxic. The former is simply an enlargement of the gland, which may be glandular or cystic. It presents no symptoms unless large enough to produce pressure with partial or complete paralysis of the recurrent laryngeal nerve, or necrosis of the tracheal cartilages with accompanying cough or dyspnoea. Their removal is comparatively simple and the mortality is practically *nil*.

The latter is a much more complicated surgical problem and embraces the so-called toxic adenomata, so clearly brought out by the studies of Dr. Plummer of the Mayo Clinic, and the so-called exophthalmic cases with which you are all familiar.

About 50% of all the cases of hyperthyroidism have exophthalmos. Of all the glands of internal secretion, if we exclude the ovary which is primarily a generative organ, the thyroid remains the most easily accessible. Its diseases have been more carefully studied, and surgical measures for their relief are better perfected than for the relief of disturbances of any of the other glands which make up the so-called endocrinous system.

Its inter-relation with the thymus, the adrenal, the ovary is presented to you in your every-day practice. The disturbances of the menopause show the close relation of the thyroid, adrenal and ovary. As the ovary becomes less active, its glandular tissues become replaced by cystic and fibrous tissues. An increase of the adipose tissue is the result when the ovary or thyroid become less active. This lack of balance of these two glands is frequently accompanied by a rise of blood pressure.

Changes in the functions of any of these organs of the body; those in the thymus accompanying disturbances in the thyroid; hence the importance of x-raying cases of goitre to eliminate the possibility of an enlarged thymus with a status lymphaticus, which has been the cause of death in certain goitre operations.

EMBRYOLOGY.

The thyroid is developed from the ectoderm which goes to make up the tissues of the pharynx. The upper cleft divides into an anterior and posterior part; the former making up the thyroid and the latter the anterior lobe of the hypophysis or petuitary body. This development from the same portion of the embryonic structure offers an explanation of the inter-relation of the anterior lobe and the thyroid.

During the early period of embryonic development the gland descends from the pharynx and becomes located in its normal position in front of the second, third and fourth tracheal rings, developing as a central mass from which the lateral lobes develop on each side of the trachea. Occasionally as the gland descends from the pharynx, segments may become detached and later develop and give us the lingual goitres, or those little fragments of the gland which discharge colloid material through a sinus on the neck and require such extensive dissections to produce a cure.

ETIOLOGY

This still remains obscure. The prevalence of goitres in certain sections of the world would lead one to believe that the water supply must be at least a contributing factor in producing disturbances in the structure and functions of this gland.

The marked diminution occasionally observed after the removal of infected tonsils tends to prove that focal infections have something to to with hyperthyroidism. The administration of iodine in certain cases will produce a decrease in size showing the low iodine content in some goitre patients.

The sudden enlargement sometimes noticed after a profound nervous shock shows how sensitively the sympathetic nervous system is related to this gland.

Symptoms of hyperthyroidism are self-evident in the majority of cases; the palpitation usually the first to attract the patient's attention, the tremor visible in the fingers and the tongue, the redness and perspiration on the skin, and the enlargement of the neck. This last symptom is best brought into view by extending the head and asking the patient to swallow.

The toxicity of the gland is not dependent upon the amount of the enlargement. In the exophthalmic cases, the bulging of the eyes varies according to the severity and duration of the disease. Vomiting, diarrhea and oedemia occur only in the severe cases in a critical stage, where operations of any kind are dangerous. Pruritus is occasionally very marked. I had one patient, where the itching was so intense that one would mistake it for scabies.

Basal metabolism is much increased, being

sometimes A + 90. The higher the metabolism rate, the more severe the case and the greater the operative risk.

TREATMENT.

The mild cases of toxic goitre sometimes yield to long periods of rest and simple life. Those, with well established symptoms, particularly the exophthalmic cases, are proper subjects for surgery. Any mild toxic case may become toxic years and years after the onset of the disease, and it is far better to operate early than to wait until serious organic changes have taken place in the vital organs of the body, particularly in the muscular structure of the heart.

The exophthalmic cases are much more frequent in the female than in the male, and appear most frequently at about thirty years of age.

All operative cases should be given a period of rest in bed, with ice applied to the neck and freedom from all psychic disturbance. Small doses of morphia and belladonna should be taken to slow down the metabolism. Digitalis is a useful drug to lessen the action of the heart, which is so annoying at times. The slower the heart and the lower the basal metabolism, the safer the operative risk.

If the pulse is continuously under 120 and the basal metabolism is under ± 30, it is safe to perform a radical operation. If the pulse is continuously over 120 and the basal metabolism over + 30, it is far better to do a preliminary ligation or use injections of boiling water in order to bring the patient into the zone of safety.

When one has to decide what to do in the individual case, he must use his surgical sense. The extremely toxic patient, rapidly losing weight, is a poor surgical risk. The two-stage operation has decreased the operative mortality in many other diseases, and, I am sure, will in the future lower the mortality of this disease.

The x-ray has been of doubtful value in the treatment of toxic goitre. Hydro-bromide of quinine is of little, if any, value. The improvement sometimes seen during its administration may be explained by the natural improvement evident from time to time in the course of the disease. This particular one seems to progress in cycles, similar to pernicious anaemia.

I have found injections of boiling water, as advocated by Dr. Porter of Fort Wayne, Indiana, of great value in bringing six cases of the very toxic exophthalmic type into the zone of safety, so that I was able to do a radical operation at one sitting.

The technique is very simple; freeze or cocainize the skin over either lobe, and with a hot syringe filled with boiling water, inject from 2 to 6 cc., according to the size of the gland. This destroys a certain amount of the gland and lowers the amount of toxic poured into the blood stream. Four to six injections usually suffice.

Primary ligation should be done in the extremely toxic cases under local anaesthesia, ligating one side at a time, and including nerves, blood vessels and lymphatics, as advocated by Dr. Charles Mayo. From one to six months should elapse before a resection is done, depending on the rate of improvement after the primary ligation.

By a process of slow evolution in the surgical treatment of hyperthyroidism, we have learned that the failure to cure many cases in the past was due to the removal of too little of the gland. From two-thirds to five-sixths of the gland should be removed, according to the toxicity of the case. If the greater part of both lobes is removed and a thin layer left with the posterior capsule, no damage will be done to the parathyroid, and sufficient gland will be left to maintain normal metabolism.

No isthmus should be left, for it is almost sure to develop and produce a noticeable and troublesome deformity.

OPERATION.

The operation itself is comparatively simple. The anaesthesia varies, according to the choice of the individual surgeon. Some use ether exclusively; others, nitrous oxide, while a third group prefer local anaesthesia.

The method which I have found most satisfactory is as follows: Morphia in sufficient dosage is administered subcutaneously to produce drowsiness. It is important to begin the administration of this about three hours before the time set for the operation. I repeat the dosage quantity to produce results in the individual case.

The patient is then placed in an upright position on the operating table, and the line of in-

cision in a wrinkle at the base of the neck is infiltrated with 1% novocaine. The skin is incised together with fat platysma and fascia. Flaps involving these structures are then turned up and down, and the sterno-hyoid and sterno-thyroid muscles and the deep fascias are exposed. The latter is incised in the median line and this, with the extrinsic muscles of the larynx, is retracted on either side. In case of large tumors these muscles have been stretched so that it is rarely necessary to cut any of the muscle fibres.

The gland is exposed and lifted from its bed and removed, leaving the posterior capsules with a thin layer of gland and the parathyroid bodies. The isthmus should always be removed for reasons already mentioned.

A small cigarette drain should always be left in to drain the blood and free thyroid material. The fascia is closed in the median line, and the skin flap with two rows of sutures, to prevent the spreading of the scar, which is hardly noticeable, if made in a wrinkle at the base of the neck, instead of over the most prominent part of the tumor. I usually use a No. 1 plain catgut subcutaneous suture, which does not have to be removed, and makes a very little scar.

In a series of 208 operations on the thyroid gland, 80% of which were for hyperthyroidism, the mortality has been a little less than 2%. Two of the fatal cases died within twelve hours of acute hyperthyreidism, while a third passed away with acute abdominal disturbance, suggestive of mesenteric thrombosis.

I think local anaesthesia, with morphine necrosis, the selection of the proper time for operation in the individual case, resorting to palliative operations or injections of boiling water in order to prepare the patient for a radical removal, and finally, the removal of sufficient gland, are the three important steps in the progress of thyroid surgery during the past decade.

The full time health officer is an asset to the community in which he serves. On the other hand, the part time health officer is a joke, as a rule. For, though he may be trained in public health work, he cannot give efficient service on a wage that would scarcely pay his office rent. As a matter of fact, most part time health officers do give an immense amount of service far in excess of that for which they are supposed to be paid. But as their bread and butter must come from the earnings they make in their private practice, naturally, the practice is given first place. Public health work today, rightly performed, is only the intensive application of that now generally accepted doctrine. And as health is the most important thing in the world, the prevention of needless sickness and deaths naturally becomes also of first importance.

Here are some figures from the *Journal of the American Medical Association,* which show substantial balances on the credit side of the health ledgers of the cities named. These figures show the death rate per year for each 100,000 inhabitants in the twelve largest cities in the United States from typhoid fever for 1910 and 1920. Note the reductions:

City	1910	1920
Pittsburgh	65.0	2.7
Philadelphia	41.7	3.3
Baltimore	35.1	4.7
San Francisco	27.3	3.1
Buffalo	22.8	5.1
Detroit	21.1	5.1
Los Angeles	19.0	2.6
Boston	16.0	1.5
Chicago	15.8	1.1
Cleveland	15.7	3.2
St. Louis	14.7	2.7
New York	13.5	2.4

—Chicago School of Sanitary Science

THE A B C OF RADIUM.

By Ernest M. Deland, M.D., Boston.

[From the Collis P. Huntington Memorial Hospital.]

THE PHYSICS OF RADIUM.

Radium is a metal of the alkaline earth family, similar in its properties to barium. Its atomic weight is 226. The metal radium has been isolated in very minute quantities, but it has no use in therapeutics. It occurs in nature in the salts, radium sulphate, radium chloride and radium bromide, which are in combination with uranium compounds in the form of pitchblende. In 1896, it was discovered that when pitchblende was placed near photographic plates, it affected the plate in the same way that light does. Bequerel described the phenomenon, and the rays were accordingly called "Bequerel rays." Radium was discovered in uraniaum ores (pitchblende) by Monsieur and Madame Curie, in 1898. Since that time, the Curie Institute in Paris has taken an important place in radium research.

The chief deposits of uranium ores in this country are in Colorado and Utah, in the form of carnotite. Previous to 1914, large quantities of this ore were sent to Germany and there

the radium was extracted. Since the beginning of the war, the methods of extraction have been perfected in this country, chiefly at Pittsburg. Formerly it was necessary to export two hundred tons of carnotite (containing 2% of uranium oxide) to obtain one gram of radium element. Lower grade ores are used now where transportation distances are shorter.

The old alchemists endeavored to effect a change from one element to another. Modern chemists ridiculed their efforts, but the whole study of radioactivity is one of changing from one element to another. These changes are automatic and go on without the aid of man. Our old definition of atom is now old-fashioned. The atom as defined today consists of a minute nucleus made up of + and — electrons and an outer system of negative electrons held in equilibrium. The electrons of the outer circle are easily altered in arrangement, but those of the nucleus cannot be changed. Certain atoms are continually exploding, resulting in a rearrangement of the electrons in the inner and outer systems. These atoms are radioactive.

In radiotherapy, we are dealing with three kinds of radiations: the alpha particle is the nucleus of a helium atom (at. wt. 4) with two + charges of electricity; beta particles are negative electrons of enormous velocity; gamma rays are similar to x-rays, but are more penetrating.

TABLE I.

ELEMENT	RADIATION	½ VALUE PERIOD	ATOMIC WT.
Uranium 1	alpha	5,500,000,000 years	238
Uranium X1	beta & gamma	24.6 years	234
Uranium X2	beta	1.15 minutes	234
Uranium 2	alpha	2,100,000 years	234
Ionium	alpha	140,000 years	230
Radium	alpha	1,730 years	226
Radium Emanation	alpha	3.85 days	222
Radium A	alpha	3 minutes	218
Radium B	beta & gamma	26.7 minutes	214
Radium C	beta & gamma	19.5 minutes	214
Radium C1	alpha	1/1,000,000 second	214
Radium D	beta	15.83 years	210
Radium E	beta & gamma	48.5 days	210
Radium F (polonium)	alpha	136 days	210
End (radium lead)			206

Note in Table I that radium is derived from uranium by a series of steps. Each element in the series gives off rays. Those giving off alpha rays lose 4 from their atomic weight. Four is the atomic weight of helium, of which atom the alpha particle is the nucleus. The time required for each element to lose one-half its value varies from a few seconds to many years. That of radium is 1730 years, while that of radium emanation is but 3.85 days. Radium itself changes into radium emanation and then into other elements (Radium A, B, C, etc.). The final product is radium lead, the atomic weight of which differs by a fraction of a per cent. from that of ordinary lead. It has the same chemical properties as lead and is an isotone of that metal.

There comes a time when the number of atoms of radium emanation disintegrating per second equals the number of atoms of radium changing per second,—there is then equilibrium between them. There is equilibrum between radium and its disintegration products in the deposits of carnotite ore found in nature. In the commercial applicator of radium salt, with its varnished surface, there is an equilibrium between the radium products. In these, it is not the radium or the emanation which is so radioactive, but the radium A, B and C, all solids. When radium emanation is used, we are one step nearer these elements (see table).

RADIUM EMANATION.

Radium emanation is a gas, giving off alpha particles. The curie, the unit of measure, named from Monsieur and Madame Curie, is the amount of emanation in equilibrium with one gram of radium element,—a millicurie, with a milligram of radium. In collecting the emanation from radium bromide in solution, the gas is passed over a hot copper wire. This combines the hydrogen and oxygen in the form of water, which is absorbed by phosphorus pentoxide. The CO_2 present is absorbed by potassium hydroxide. The purified emanation is then pumped in a vacuum into a long capillary glass tube. This is then cut up into the desired lengths for use. The apparatus for the preparation of emanation was first devised by Dr. William Duane of the Huntington Hospital.

The emanation when collected in these tiny glass tubes, at first has very little radioactive strength. Immediately, however, Radium A,

B and C are deposited on the walls of the tube and the tube becomes radioactive. After three hours, a tube can be measured. The measurement of emanation is made possible by the fact that emanation ionizes gases. If a tube is placed between two insulated metallic plates and a current applied, the flow of the current may be measured by the galvanometer. Emanation, rather than radium salt, has been used entirely at the Huntington Hospital for the past six or seven years.

THE TECHNIQUE OF RADIUM THERAPY.

The complicated technique of radiotherapy depends on the fact that alpha beta and gamma rays vary in their penetrating powers. A thin layer of radium lying in a dish gives off 90% alpha, 5% beta, and 5% gamma particles. Alpha rays are easily absorbed and have very little penetrating power. If radium salt or the emanation is placed in a thin glass tube, practically every alpha particle is absorbed by the tube. The radiation from this tube is then about equally beta and gamma radiation. In a varnished applicator, if the varnish is very thin, there is some alpha radiation, but the alpha ray plays a very little part in radiotherapy.

Beta rays are made up of short and long rays, all of which are more penetrating than alpha rays. Glass emanation tubes laid on a surface have a very powerful effect on the surface and but little on the deeper structures. This is the type of radiation needed for a very thin, superficial epithelioma. If the glass emanation tube is placed inside of a hollow steel tube one-fourth mm. in thickness, the more caustic soft beta rays are absorbed. This is the type of tube commonly used in our applicators. Into one end of this steel jacket is screwed a cap which bears a letter stamped with a die. In the other is screwed a point. The latter is useful in inserting the steel tube into a growth or into another applicator. The letter on the cap serves to identify the tube and thus, by reference to the table of measurements for the day, to tell its strength. For vigorous radiation, as in treating an infiltrating epithelioma, this type of tube is used in direct contact with the tissues. The erythema or the slough from such a treatment takes on an oval shape because of the shape of the emanation tube. If the lesion to be treated is circular, this is a disadvantage. This difficulty is avoided by placing the tube on a round brass cone 1 cm. in height. The brass keeps the rays within the cone and the reaction on the tissue is then circular. Experiments by Dr. Bovie with photographic paper have shown that such radiation affects all parts of the area equally. However, a heavier dose is required because of the distance from the growth.

A filter of two millimeters of lead cuts off practically all the beta rays and allows only the gamma rays to pass through. Such an applicator is used for the treatment of deeper structures, where it is not desirable to cause destruction of the skin. Doses of this type are given over glands, the spleen, or deep metastases. Gamma rays are very penetrating, and closely resemble the x-rays. They are not particles of matter, as are the alpha rays, but pulsations of the ether. Gamma rays have very little effect on the skin. A filter of silver, 1 mm. in thickness, may also be used to cut off the beta radiation. This is a convenient applicator for the treatment of naevi. It is also used around the periphery of epitheliomata in what we term a "prophylactic" treatment.

Cancer tissue of the squamous-cell or glandular-cell type can be retarded in its growth by heavy doses of filtered radiation, but unless a dosage is given sufficient to destroy the whole mass and produce a slough, there is usually a recurrence. Such a destruction of a tumor mass may be accomplished by radiating with gamma rays, the filter cutting off the beta rays, or by a combination of beta and gamma radiation. Beta rays are absorbed by a comparatively thin layer of tissue, while gamma rays pass further toward the periphery. To have the same amount of gamma radiation absorbed in the thin layer of tissue, it is necessary to have many times the dosage used in beta and gamma radiation. For equal amounts of energy absorbed, the effects of beta and gamma rays are apparently the same. For the best economic use of radium or emanation, it is desirable to depend on the beta radiation to produce the most sloughing effect.

During the past few years we have used tiny glass tubes of emanations for the treatment of large growths or tumors which are inaccessible for ordinary treatments. The Huntington Hospital was the first to use this method of treatment. Tubes of from one to eight millicuries are inserted into the growths with trocars, and allowed to remain. As the emanation loses one-sixth of its strength each day, these are "dead"

in a few days. They then slough out of their own accord. If they remain in the tissues, there is no harmful effect. A tube measuring one millicurie, if it stays in situ, gives a radiation totalling 132 millicurie hours before the tube becomes worthless. A two-millicurie tube gives 264 millicuries hours, and so on. The best results are obtained by using several tubes of one to two millicuries placed about 1 cm. apart. Tubes of this size are sufficient to destroy the tissue immediately adjoining, by their beta radiation. The volume of tissue actually destroyed is not proportional to the strength of the tube, the chief benefit from the larger tube being in the increased penetrating radiation, although the area of necrosis is slightly enlarged. Tubes larger than four or five millicuries cannot be used in a tumor unless drainage is instituted. Thus, in a large ulcerated cauliflower mass, where there is a means of egress for the slough, tubes as high as seven or eight millicuries may be used. In closed, encapsulated masses, large doses cannot be given without sooner or later giving a chance for drainage.

THE NATURE OF RADIATION.

Now as to the nature of radiation. The cells of a malignant growth are embryonic. They are peculiarly affected by radiation, being from two to seven times as sensitive to radiation as normal tissues, so that they are destroyed more easily.

Microscopically, no change can be noted in epithelial cells radiated from a distance, that is, by gamma radiation. However, there is an increase in the surrounding connective tissue. This has led some writers to think that this evidence was sufficient to prove that the final effect on the epithelial cells was caused entirely by a blocking of the blood vessels, a consequent loss of nutrition to the cells, and finally, death of the cells. This theory is not generally accepted as explaining the entire phenomenon of radiation.

Probably the most generally accepted theory among biophysicists is that radiation causes an ionization of the tissues which is similar to the ionization brought about by the radiation of gases. The resulting effect on the tissues is a gradual one, the rapidity varying in direct proportion to the dosage.

This change in the tissues has been likened to the changes made in a photographic plate by light, for there, the more intense the light, the greater the effect on the silver salts of the plate. Once the exposure of the silver salt has been made, there is no further change in the plate until it is "developed," at which time the different degrees of light from the original object are brought out.

Similarly, there is a latent time after radiation until the process of "development" goes on. The exact nature of this development in the tissues, we do not know. We do know that light causes definite biochemical and physical changes in protoplasm. Bovie has shown that heat is one of the agents in bringing out the effects of radiation. He has shown that if egg albumin is exposed to the ultra-violet light at 0° C., there is no effect; but if the albumin is raised to room temperature after radiation by this light, the protoplasm coagulates.

It seems probable that the chief effect of radium is exerted on the nuclei of the cells and that the cell is most susceptible during the stage of mitosis. The theory has been advanced that the greater the proportion of nuclei to the cytoplasm, the greater the effect of radium on the cells. It is well known that the small, round-cell sarcoma, or lymphosarcoma, is very quickly effected by radiation.

The effect on a tumor when a small tube of emanation is inserted into it is quite different from treatment at a distance. At the end of ten or fourteen days, there is an area of complete necrosis surrounding the tube. Outside of this zone of necrosis, there is an area in which there is swelling of the epithelial cells, vacuolation, and oedema of the cytoplasm, and amitosis, hypochromatism and karyorrhexis of the nuclei. Accompanying this, there is capillary congestion, infiltration by lymphocytes and leucocytes, and around the periphery further infiltration by fibroblasts. All these changes occur over an area one or two centimeters in diameter. The central necrosis is the effect from beta and gamma radiation, while the peripheral changes are due to the gamma effect alone. Without doubt, some of the epithelial cells around the periphery have been damaged to such an extent that they will die; others may have been more resistant, possibly more mature, and they stop their mitoses for a time, only to continue after the effect of radiation has worn off. Indeed, clinical experience has shown that the late effect on some of these cells is one of stimulation.

It is the policy of the Huntington Hospital to treat no cases with radium which may be treated equally well, or better, with x-ray. This is due to the scarcity and high cost of radium. The Hospital has about one gram of radium element, nearly all of which is used to produce emanation tubes. Cancer of the thyroid and breast, exophthalmic goitre, enlarged thymus, and certain other conditions show as good results with x-ray. Certain of our cases are treated with a combination radium and x-ray therapy.

THE ADVANTAGES OF RADIUM.

What, then, are the advantages of radium? (1) It has greater penetrating power, particularly the gamma rays. (2) It may be applied to smaller areas than the x-ray. (3) It is more easily applied to certain internal organs, as the bladder and uterus. (4) It is easier to transport than an x-ray machine. (5) It may be inserted inside tumors. (6) The source of the rays is much more accurately placed.

Radium emanation is used instead of the salt because of the ease with which it can be adapted to different types of applicators. The loss of a tube is a small matter, because of the low value of the emanation. However, the use of emanation requires the use of a large amount of radium (at least half a gram), an expensive plant for its production, and the employment of trained men for the upkeep of the plant.

THE CLINICAL USE OF RADIUM.

The large majority of superficial epitheliomata are successfully treated with radium. A lesion on the forehead, neck or face may be excised, if desirable, but lesions on the eyelids, inner canthus or nose are better treated with radium, for there is less deformity. Large lesions are often excised, cauterized, and radiated afterward, if necessary. Excision of these lesions for the purpose of having a pathological examination is not important. They are the type that metastasize very late in the disease, if at all, so that the removal of glands does not have to be contemplated. Epithelomata of the ear does not respond as readily as others, partly because a smaller dose must be given. The cartilage is easily destroyed if a heavy treatment is given. This type occasionally does metastasize to the neck.

Keratoses of the face are easily destroyed by radium. Keratoses and precancerous lesions of the lips are also easily destroyed. However, it is our policy to treat with radium nothing but the earliest keratoses of the lip, except for palliation, in cases clearly inoperable. All cancers of the lip, or suspicious keratoses, should be excised by a V-shaped excision, the specimen examined, and a neck dissection done if indicated. These lesions metastasize to the neck very early, and the only safe way is to do the complete operation.

Cancer of the tongue (if inoperable), floor of the mouth, and tonsils, are treated by the insertion of emanation tubes. Relief of symptoms usually follows, and occasionally an apparent cure. However, the neck metastases, if they appear, are not easily affected by radiation. X-rays seem to have more effect than radium.

Many cases of leukoplakia are relieved by radium. These are probably treated equally well by fulguration.

In cancer of the antrum, combined operation and radium treatment is the method of choice. The radium should be applied at the time of operation, after all the gross cancer has been removed.

Cancer of the oesophagus does not do well under any form of treatment. Some cases are relieved by one or two radium treatments, but this is only temporary. In order to destroy the cancer, a treatment heavy enough to cause a severe reaction is necessary. This reaction is often serious enough to cause complete obstruction. Frequently the growth extends into the glands of the mediastinum and cannot be reached.

Radium has no value, either curative or palliative, in the treatment of cancers of the stomach or intestines.

Rectal cancer should never be treated with radium if it is operable. If inoperable, a colostomy should precede treatment. Otherwise the pain and tenesmus resulting from the necessarily heavy radiation are very severe—far worse than the discomfort of a colostomy.

Cancer of the breast, if inoperable, is best treated by x-ray. In some clinics radium is used, but a very large amount is needed to get the same results given by x-ray. Local implantations may be used to destroy some of the nodules, but this does not take care of the glands.

Cancer of the thyroid may be treated by the

insertion of emanation tubes, but x-ray is probably better.

Many cases of cancer of the larynx are relieved by radium therapy, but few permanently. Combined operation and radium works well in certain cases. Necrosis of the laryngeal cartilage must be guarded against. Tracheotomy must precede treatment, otherwise the reaction may complete the obstruction.

Prostatic cancer may be treated by the insertion method through the peritoneum or by the intraurethral route. Probably the best results are by the combined operative and radium method. Results, as a rule, are not very good.

Opening of the bladder and the insertion of emanation tubes is the best way to treat vesical cancers, although they may be treated by the use of cystoscope and by applicators inserted in that way. Female bladders are more easily treated than those of the male.

Cancer of the uterine fundus is best treated by hysterectomy. If hysterestomy is contraindicated, good results are secured by intrauterine radium treatments.

In cancer of the cervix which involves the broad ligaments or encroaches on the vaginal wall and is therefore inoperable, the treatment of choice is the insertion of numerous tubes into the cervical growth, combined with steel-screened intrauterine radium treatments. Preliminary cauterization is not advisable, for the cauterization accomplishes no more than the radium, and if done at a separate sitting, it involves a loss of time. Treatment by the former method promises good results. Nearly every patient is relieved of pain, bleeding and discharge, and some are clinically cured by radium. Cancer of the vulva and vagina is treated by insertions.

Large fibroids of the uterus should be removed by operation, if operation is not contraindicated. Many smaller fibroids are relieved by intrauterine radium therapy. Relief is also given to certain obscure cases of menorrhagia.

Keloids respond readily to radiation. It has been found that they disappear more quickly if a moderately heavy treatment is given rather than a heavily screened treatment.

Cavernous naevi are easily destroyed, but port wine marks are more resistant, requiring numerous treatments. Hairy and pigmented naevi respond fairly well. Radium is to be preferred for these lesions in children, for the treatment is painless. Warts, occasionally lupus, psoriasis and lichen planus, which are resistant to other treatment, may be destroyed by radium.

Radium is now the accepted treatment of myelogenous leukemia. The white count and the large spleen are reduced by one or two treatments. The effect is only temporary, for later the spleen enlarges and the white count rises. A second series of treatments has less effect than the first, and so on, until finally the patient dies. Lymphatic leukemia may be helped for a time, but the relief is more temporary than in the other type.

Hodgkin's disease, malignant lymphoma, and lympho-sarcoma, as a rule, are easily influenced by radiation. The story is much the same as in leukemia. At first they respond quickly, but when they recur they are more resistant. When radium loses its effect, the end comes very quickly. Certain of the Hodgkin's cases belong to the so-called chronic type and live several years with an occasional treatment. Usually they die from enlargement of the abdominal, retroperitoneal or mediastinal glands.

Metastatic glands of squamous-cell cancer are not affected much by radium. A few cases have been treated by the insertion method, and the glands have become smaller. The glands do not disappear unless they are entirely destroyed, and this endangers neighboring vessels and nerves.

Sarcoma of the small-cell type responds to radium therapy better than the spindle-cell type. Combined operative and radium treatment is frequently the best. If radium is used alone, the insertion type of treatment gives the best results. Many tubes should be inserted into the periphery of the growth.

OTHER USES OF RADIUM.

During the war, radium was used extensively in the manufacture of illuminated airplane dials, watch faces and other indicators. Minute quantities of radium, mixed with phosphorescent sulphide of zinc, caused the zinc compound to glow spontaneously in the dark. The quantity of radium used is not sufficient to give the effect alone, as only from 25 to 300 millionths of a gram are used per gram of material. The sulphide of zinc has a limited ability to cause this effect, so that, if a greater amount of radium is used, the original luminosity is greater, but the decay is more rapid.

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The Massachusetts Medical Society

PROCEEDINGS OF THE SOCIETY.

First Day, May 31, 1921.

THE usual clinics and the sessions of the Sections were omitted owing to the meeting of the American Medical Association in Boston, June 6 to 10, this year. The exercises of the anniversary began with the annual meeting of the Supervising Censors in John Ware Hall, Boston Medical Library, at 4.30 P.M., when Dr. Walter C. Howe acted as secretary *pro tempore*, and the usual business was transacted. The Council meeting followed at 5.00 P.M. (See Proceedings of the Council.) In the evening the Shattuck Lecture was delivered in John Ware Hall, by Dr. Haven Emerson of New York. Subject: "The Prevention of Heart Disease, A New Practical Problem." After the lecture there were light refreshments in the Supper Room.

Second Day, June 1, 1921.

The Society met at the Copley-Plaza Hotel at 9.30 A.M., for the exercises of the one hundred and fortieth anniversary, 130 fellows and guests being present during the morning. The President, Dr. Alfred Worcester, was in the chair. In the absence of the Secretary, Dr. Walter C. Howe was elected secretary *pro tempore*. The reading of the record of the last meeting was omitted by vote and the record as printed and distributed in the BOSTON MEDICAL AND SURGICAL JOURNAL, the official organ of the Society, was adopted. The Secretary read the following statement as to membership for the Society year closing June 1, 1921: Deaths, 54; resignations, 41; deprivations of the privileges of fellowship, 14, making a total loss of 109. There were restored by the Council, 6 fellows and admitted by the Censors, 224, making a total gain of 230, and a net gain for the year of 111. Adding this to the total of last year, 3822, the total membership on June 1, 1921, was 3933.

The following proposed amendment to the By-Laws, approved by the Council, February 2, 1921, was considered:

That Chapter IV, Section 3, of the By-Laws be so amended that the last sentence of paragraph one shall read: "Councilors only, shall be eligible to the offices above named," *viz.*, president, vice-president, secretary, treasurer and librarian, thus conforming the By-Laws to the Statutes, 1803, Chapter 85, Section 3. Digest, Article V, paragraph 3, which provides that the Councilors shall "appoint, from among themselves, a president, and such other officers of the said corporation as are to be so appointed."

The Chair having some doubt as to the advisability of passing this amendment, it was referred by vote to a committee consisting of Dr. W. P. Bowers, Dr. G. O. Ward and Dr. A. K. Stone. This committee reported that the personnel of the Council was defined by Chapter IV, Section 1, of the By-Laws. This section provides that the Council shall consist of Councilors chosen by the district societies, the officers of the parent society, the ex-presidents, the vice-presidents *ex officiis*, and the chairman of each standing committee, the last being elected by the Council itself; that when a man once became a member of that body, even though a member *ex-officio*, he was in good standing and therefore eligible to reëlection to office, until removed by the Socity, by resignation or by death. The Chair, not agreeing to this interpretation, it was moved, seconded and voted that this proposed amendment to the By-Laws be laid over until the next annual meeting.

The following proposed amendments to the By-Laws that had received the approval of the Council, February 2, 1921, were put to a vote and adopted unanimously:

Chapter I, Section 2 of the By-Laws: After the words, "fiscal year," line two, insert in parenthesis marks "except as hereafter provided in Section 6 of this chapter"; also Chapter I, Section 6. The last sentence of paragraph one shall read: "The assessment paid by fellows who are admitted to the society following the November examinations, shall be that fixed for the next succeeding fiscal year, and shall cover the dues both for the current year and for the next fiscal year."

The question of continuing the practice of sending delegates to the annual meetings of neighboring state medical societies was raised by the chair and discussed by Dr. E. A. Codman, Dr. S. B. Woodward and Dr. C. E. Abbott. No action was taken.

Dr. A. P. Merrill, referring to the vote of the Council on the previous day (May 31) asking the Secretary of the Society to arrange with the officers of the district medical societies throughout the state for a series of six joint meetings next fall, said that it had been suggested that such meetings could be more advantageously arranged by a committee made up of members from different parts of the state, therefore he *Moved,* That a committee of three be appointed by the chair to have charge of the arrangements for the proposed group meetings of the district medical societies in the fall of the year 1921. The motion being duly seconded, was so voted. In accordance with the vote, the President appointed as this committee: Dr. W. P. Bowers, Clinton; Dr. F. E. Jones, Quincy; Dr. A. P. Merrill, Pittsfield.

Papers were read according to this program:

1. "Maternity Aid and Infant Welfare,"
   Dr. Walter P. Bowers, Clinton.
2. "Legislative Aspects of Vaccination."
   Dr. Samuel B. Woodward, Worcester.
3. "Physical Education of Children and Physical Training in the Public Schools."
   Dr. Joel E. Goldthwait, Boston.
4. "Premedical Education."
   Dr. David L. Edsall, Cambridge.

At twelve o'clock, noon, the Annual Discourse was delivered by Dr. F. W. Anthony of Haverhill. Subject: "Some of the Mutual Relations Between the Physician and the Commonwealth."

The annual dinner was served in the Ball Room at the close of the oration, to 164 fellows and guests. The President said grace, in the absence of the Rev. George A. Gordon, who had been delayed, and introduced the following speakers: His Excellency Channing H. Cox, Governor of Massachusetts; His Honor Andrew J. Peters, Mayor of Boston; Roscoe Pound, dean of the Faculty of Law, Harvard University, the Rev. George A. Gordon, pastor of the New Old South Church, Boston, Dr. Hubert Work, president-elect of the American Medical Association, and Dr. John W. Bartol, president-elect of the Massachusetts Medical Society.

Adjourned at 4 P.M. WALTER C. HOWE,
Secretary pro tempore.

ADMISSIONS REPORTED FROM JUNE 9, 1920, TO JUNE 1, 1922.

Year of Admission.	Name.	Residence.	Medical College.
1920	Adams,	Donald Stansbury,	Worcester 35
1921	Adams,	William Bradford,	Springfield 11
1921	Adler,	Stuart Welsh,	Boston 11
1921	Alden,	Augustus Elihu,	North Billerica 24
1920	Allen,	Harold Musgrave,	Lawrence.....12
1920	Atwood,	Warren Gerald,	Boston 11
1921	Bacon,	Joseph Ambrose Patrick,	Lawrence ..34
1921	Barach,	Alvan Leroy,	Boston 17
1920	Barrett,	Charles George,	Worcester 22
1920	Barrow,	Allen Rogers,	Newtonville 12
1921	Bazin,	Edmond Albert,	Haverhill 25
1921	Bean,	Harold Cotton,	Belmont 11
1920	Begg,	Alexander Swanson,	Jamaica Plain ..15
1921	Bell,	James Francis, Jr.,	Boston 28
1921	Benoit,	Samuel Joseph,	Gardner 34
1920	Benson,	Clarence Kirk,	Brighton 12
1921	Berman,	Saul,	Boston 11
1920	Betteridge,	Laurence Augustine,	Boston 12
1921	Bishop,	William Atkins,	Boston 12
1920	Blood,	Guy Frank,	Roslindale 10
1921	Bloombergh,	Horace Deschamps, Chestnut Hill	6
1921	Bonner,	Clarence Alden,	Worcester 22
1921	Brennan,	John Patrick,	North Adams 20
1921	Brittingham,	Harold Nixon,	Boston 11
1920	Brodrick,	Francis Sidney,	Boston 44
1920	Browder,	Newton Clarence,	Hathorne 11
1920	Bullard,	Carleton Wheeler,	Newburyport ..11
1920	Burnett,	Nathan Lowe,	Cambridge.....45
1921	Burns,	John Edward,	Boston 12
1921	Burwell,	Charles Sidney, Jr.,	Boston 11
1920	Byrnes,	John Peter,	Springfield.....48
1920	Cahill,	Henry Philip,	Boston 11
1921	Campbell,	Charles Macfie,	Cambridge 43
1920	Carr,	Earl Burton,	Melrose 16
1921	Carr,	George Byron,	Lynn 10
1920	Cassidy,	Franklin Chester,	Medford 12
1921	Chaffin,	George Lawrence,	Boston 11
1921	Cheley,	Glen Evan,	Boston 11
1920	Cheney,	Robert Cartwright,	Boston 11
1920	Churchill,	Edward Delos,	Boston 11
1920	Clark,	Cecil Whitehouse,	Newtonville 10
1920	Cliff,	Frederica Leigh,	Boston 10
1921	Colburn,	Frederick Wilkinson,	Boston 10
1920	Cooper,	Alden Vernon,	Lynn 22
1920	Cooper,	Olive Alfreda,	Boston 12
1921	Corea,	George Thomas,	Provincetown 12
1920	Cote,	Corinne Rhea,	Worcester 12
1920	Crane,	George Edward,	Haverhill 25
1920	Crothers,	Bronson,	Boston 11
1920	Cruff,	Frederick Ellery,	Boston 11
1921	Cruikshank,	Frank Sheppard,	Dorchester 12
1920	Cunning,	Daniel Sylvester,	Dorchester 48
1920	Cunningham,	Richard Augustine,	Roslindale 12
1920	Cunningham,	Thomas Donald,	Boston 11
1921	Curran,	Arthur Manning,	North Adams 20
1921	Curran,	William Louis,	North Adams 30
1920	Curtis,	Robert Dudley,	Boston 11
1921	Dahlen,	Carl Albert,	Boston 12
1920	Daniels,	Louis, Riley,	Watertown 10
1921	Davis,	William Lincoln,	Boston 11
1920	DeCesare,	Nicandro Francis,	Lawrence 12
1920	Desmond,	Margaret Ellen,	Boston 12
1920	Diehl,	Harold Edgar,	Quincy 10
1921	Douglass,	Edmund Stowe,	South Barre 22
1920	Doyle,	John Henry,	Fall River 32
1920	Dubins,	Joseph Arthur,	Salem 12
1921	Dudley,	Oscar Albert,	Fitchburg 25
1920	Dunn,	John Henry,	Rockland 12
1920	Duval,	Leon Emile,	East Gardner 22
1921	Eaton,	Charles Alexander,	Boston 10
1921	Edgelow,	Arthur Ford Geddes,	Boston 11
1920	Edmunds,	Fred Andrew,	Shelburne Falls 8

Year of Admission.	Name.	Residence.	Medical College.
1920	Eliot, Martha May,	Boston	6
1920	Emery, Edward Stanley, Jr.,	Boston	11
1921	Fawcett, Deborah,	Newton	10
1920	Fitts, Henry Bird,	Southbridge	35
1920	Fitzgerald, Edmund Boyd,	Quincy	11
1921	Frank, John Raymond,	Boston	23
1920	Fremont-Smith, Maurice,	Boston	11
1920	French, Leland Malcom,	Worcester	12
1920	Fried, Anton Ranseen,	Newtonville	18
1921	Gallagher, James Francis,	Waltham	12
1921	Gilchrist, Bernard Francis,	Springfield	41
1920	Gleason, Mardis Edward,	Newtonville	22
1921	Glover, Donald Mitchell,	Boston	11
1920	Golden, Ross,	Boston	11
1921	Gorin, Nathan,	Roxbury	10
1921	Grabfield, Gustave Philip,	Boston	11
1920	Gurjian, Leon Kevork,	Lynn	12
1921	Hagler, Frederic,	Springfield	3
1920	Haines, Samuel Faitoute,	Boston	11
1921	Ham, William Addison,	Dorchester	10
1920	Hammond, Harry Weymouth,	West Newton	12
1920	Harvey, John Woods,	Lynn	10
1920	Hatt, Ednah Swasey,	Newton	12
1921	Hayes, David Patrick,	Boston	10
1920	Henson, Paul Palmer,	South Yarmouth	12
1920	Hines, Clarence Reynolds,	Amesbury	10
1921	Hodgson, John Sprague,	West Roxbury	11
1920	Hoey, Warren Henry,	Newton Upper Falls	11
1920	Hogan, Daniel John,	Charlestown	12
1921	Holland, John Alexander,	So. Ashburnham	21
1921	Holland, William Joseph,	Malden	4
1921	Hollister, Frederick Martin,	Brockton	22
1921	Hopkins, Frederick Sherman,	Springfield	11
1920	Hosmer, Merrill Fowler,	Springfield	7
1920	Hughes, Frank,	Dorchester	12
1921	Hussey, Earle Edward,	Fall River	11
1921	Iovanna, Nicholas,	Boston	12
1921	Israelian, Agnes Grace,	Boston	12
1920	Jackson, Howard Burr,	Jamaica Plain	11
1920	Jankelson, Isaac Rudolph,	Roxbury	12
1920	Jellis, Walter,	Somerville	12
1921	Jennings, John Greenwood,	Waltham	12
1920	Johnson, Elmon Reuben,	Wollaston	10
1920	Jones, Basil Bradbury,	Boston	41
1921	Jones, Chester Morse,	Boston	11
1921	Jordan, Frank Herbert,	New Bedford	5
1920	Kassees, Saad Hanna Allah,	Lowell	12
1921	Kelley, Edward Paul,	Woburn	25
1920	Kelly, Otis Francis,	Hathorne	11
1920	Kenney, Thomas Hopper,	Northampton	26
1921	Kershaw, George Henry,	Fall River	20
1921	King, Donald Storrs,	Brookline	11
1920	Kitsis, Henry Hyman,	Boston	11
1921	Koppel, William,	Boston	12
1920	Kotler, Moses George,	Brockton	12
1921	Lacey, Henry Orlando,	Somerville	12
1921	Larsson, Johan Gustave,	Boston	9
1920	Laserte, Charles John,	Leominster	32
1920	Lavelle, Gertrude Helen,	Worcester	12
1920	Leverone, Louise May,	Boston	25
1921	Livingston, William Kenneth,	Boston	11
1921	Looney, Joseph Michael,	Somerville	11
1920	Loring, Benjamin Tappan,	Watertown	10
1920	Lucy, John Joseph,	Boston	11
1920	Lund, Charles Carroll,	Boston	11
1920	Lyon, Walter Sidney,	Fall River	22
1920	Mace, Roswell Greenwood,	Springfield	12
1921	Marvin, Harold Myers,	Boston	11
1920	Mason, William,	Fall River	11
1921	Maynard, Herbert Ernest,	Boston	10
1921	McAuslan, James Lewis,	North Grafton	11
1920	McDonald, John Francis,	Lynn	22
1921	McKee, George,	Brighton	25
1920	McKittrick, Leland Sterling,	Boston	11
1921	McLeod, Melvin Saunders,	Melrose	22
1920	Melick, Joel Miller,	Worcester	21
1920	Menard, Leon Joseph,	Fall River	22
1920	Merrill, Ralph Edward,	Boston	11
1920	Mills, Chester Rudolph,	Boston	11
1920	Monroe, Noel Gates,	Southbridge	11
1921	Morse, Frederick Otis,	Newburyport	12
1920	Mullen, Walter John,	Springfield	12
1920	Murphy, Albert Barnard,	Boston	12
1920	Murphy, John Michael,	Florence	12
1920	Murphy, Joseph William Partick,	Peabody	12
1920	Nicholson, Minnie James Cantelo,	Haverhill	25
1920	Nicholson, Minnie James Cantelo,	Haverhill	25
1920	Norman, Samuel,	Malden	10
1921	Norton, Thomas Joseph,	Pittsfield	20
1921	Nye, Robert Nason,	Boston	11
1921	Ohler, William Richard,	Boston	11
1920	O'Meara, John William,	Worcester	11
1921	Paine, Mortimer Harwood,	Maynard	12
1920	Pelletier, William Joseph,	Brighton	12
1920	Persons, Carl Clough,	New Bedford	11
1920	Phillips, Frank Elmer,	North Chelmsford	7
1920	Phillips, Karl Tristram,	Worcester	12
1920	Polak, Isaac Benjamin,	Springfield	12
1921	Quinby, Robert Stanley,	Watertown	12
1920	Raleigh, Walter Melvin,	Springfield	12
1921	Randall, Francis Drew,	Malden	22
1920	Randall, Guy Charles,	Lowell	12
1921	Raymond, Albert Orville,	Worcester	12
1921	Remich, Sumner Haven,	New Bedford	12
1921	Risley, John Norman,	New Bedford	19
1920	Roberts, Harry Lewis,	Springfield	12
1921	Roberts, Oscar Brown,	Baldwinsville	36
1920	Rowland, William Denton,	Lynn	46
1920	Saeger, Ernest Tirrill,	Boston	11
1920	Sanders, Morris Blackman,	Boston	11
1920	Saunders, Sallie Harding,	Hopedale	12
1920	Scholz, Samuel Benjamin, Jr.,	Springfield	13
1921	Schunk, Clara Margaret,	Melrose	40
1920	Seaman, James Alpheus,	Springfield	17
1920	Segal, Samuel, Jr.,	Springfield,	12
1920	Senecal, Raymond Ernest,	New Bedford	10
1921	Shaughnessy, Michael James,	Framingham	11
1920	Shaw, Frederick King,	Concord	11
1920	Shedden, William Martindale,	West Newton	11
1920	Shirley, John Newton,	Watertown	11
1920	Silverman (now Sills), William Yale,	Boston	12
1921	Simons, Sigmund,	Boston	12
1921	Simpson, Charles Moffett,	Boston	11
1920	Siragusa, James Joseph,	Brighton	30
1920	Sisco, Dwight Lewis,	Boston	11
1920	Slater, Robert,	Boston	12
1920	Smith, Curtis Everett,	Boston	11
1920	Smith, Lawrence Weld,	Brookline	11
1920	Stamas, Theodore Albert,	Lowell	12
1920	Stein, Louis Charles,	Boston	11
1920	Stillman, Raymond Durgin,	Worcester	11
1921	Swift, Robert,	Roslindale	11
1921	Tierney, Thomas Francis,	Hudson	32
1920	Vartanian, Mardiros Bedros,	Lawrence	47
1921	Vose, Samuel Norton,	Boston	10
1921	Walker, Lewis Marshall,	Boston	11
1920	Walsh, James Henry,	Fall River	7
1920	Wein, Barnet Maurice,	Roxbury	10
1920	Weinberg, Philip Bacon,	Brockton	12
1921	Weissman, Ruth,	Boston	12
1920	Welles, Edward Sawtelle,	Boston	11
1920	Wentworth, Lowell Franklin,	Melrose	14
1920	West, Gustav Frederick,	Roxbury	12
1921	Wickham, George Smallwood,	Lee	11
1920	Wilcox, John Maxon,	Woburn	10
1921	Williams, Carl Alonzo,	Worcester	21
1920	Williams, Charles Amory,	Brookline	11
1921	Wilson, Philip Duncan,	Boston	11
1921	Winestine, Frederica,	Worcester	42
1921	Witte, Max Ernest, Jr.,	Boston	18
1920	Woo, Shutai Tinwang,	Boston	11
1921	Wood, Russell,	Boston	11
1921	Yorshis, Philip,	Cambridge	12

Total admissions, 224.

KEY TO MEDICAL COLLEGES.

3 Washington University Medical School, St. Louis.
4 Georgetown University School of Medicine.
5 Bowdoin Medical School.
6 Johns Hopkins University, Medical Department.
7 College of Physicians and Surgeons, Baltimore.
8 Baltimore Medical College.
9 Long Island College Hospital, Brooklyn.
10 Boston University School of Medicine.
11 Medical School of Harvard University.
12 Tufts College Medical School.
13 University of Colorado, School of Medicine.
14 Dartmouth Medical School.
15 Drake University College of Medicine, Iowa.
16 George Washington University Medical School, Washington, D. C.
17 Columbia University College of Physicians and Surgeons.
18 State University of Iowa, College of Homeopathic Medicine.
19 University of Pennsylvania, Department of Medicine.
20 Jefferson Medical College.
21 Hahnemann Medical College of Philadelphia.
22 University of Vermont, College of Medicine.
23 Indiana University, School of Medicine.
24 McGill University, Faculty of Medicine, Montreal.
25 College of Physicians and Surgeons, Boston. (Action of Com'tee on Med. Educa. and Med. Dips.)
26 University of the South, Medical Department, Tennessee.
28 University of Oregon, Medical School.
30 University and Bellevue Hospital Medical College.
32 University of Maryland, School of Medicine.
34 Baltimore University, School of Medicine.
35 University of Virginia, Department of Medicine.
36 Medico-Chirurgical College of Philadelphia.
40 College of Physicians and Surgeons, Chicago, Ill.
41 Medical College of Virginia, Richmond.
42 Cornell University Medical College, New York.
43 University of Edinburgh, Scotland.
44 Detroit College of Medicine and Surgery.
45 Queen's University, Faculty of Medicine, Kingston, Canada.
46 University of Michigan, Momeopathic Medical School.
47 University of Illinois, College of Medicne.
48 Albany Medical College.

DEATHS REPORTED FROM JUNE 8, 1920, TO JUNE 1, 1921.

Admitted.	Name.	Place of Death.	Date of Death.	Age.
1884	Allen, Bradford	Nashua, N. H.	May 2, 1921	48
1915	Andrews, Oren	Gardner	April 2, 1921	56
1871	†Barton, Chester Manley	Mitteneague	Oct. 1, 1920	82
1899	Beckley, Chester Charles	Clinton	Feb. 4, 1921	45
1889	Bernard, Barnard Lecherzack	South Boston	Oct. 28, 1920	57
1901	Blake, Le Grande	Riverside, R. I.	April 22, 1921	67
1882	Blanchard, Benjamin Seaver	Brookline	Jan. 14, 1921	64
1868	†Boardman, William Elbridge	Boston	Jan. 11, 1921	76
1903	Brady, James Francis	West Newton	May 2, 1921	48
1890	Brooks, William Allen	Brookline	May 20, 1921	56
1893	Brown, Frank Byron	Dorchester	July 1, 1920	56
1901	Bushnell, Edward Henry	Roxbury	Jan. 23, 1921	55
1855	†Chase, Irah Eaton	Haverhill	Sept. 24, 1919	88
1917	Chisholm, Lawrence Chesley	Boston	April 2, 1921	29
1895	Conroy, Peter John	Randolph, N. H.	Nov. 27, 1920	65
1904	Crocker, Louis Allen	Brewster,	Jan. 8, 1921	57
1880	Davis, Samuel Thomas	Vineyard Haven	April 18, 1919	62
1887	Deane, Wallace Harlow	Springfield	April 10, 1920	67
1906	Dutton, Julius Maltby	Westfield	Jan. 29, 1921	43
1884	Eames, George Franklin	Scarboro Beach, Me.	Sept. 5, 1920	66
1892	†Faxon, Eudora Meade	Arlington Heights	Feb. 10, 1921	78
1895	Grant, James Henry	Lynn	Dec. 28, 1920	70
1885	Hahn, Albert Johann	Sharon, Vt.	Aug. 1, 1920	67
1870	Hayes, Stephen William	New Bedford	Nov. 2, 1920	72
1882	Howard, Amasa	Chelmsford	March 3, 1921	63
1896	Hughes, Laura Ann Cleophas	Roxbury	July 30, 1920	59
1901	Johnson, Walter Sydney	Los Angeles, Calif.	Sept. 17, 1920	49
1889	Kean, Michael Edward	Manchester, N. H.	Sept. 22, 1920	57
1920	Macdougall, Duncan	Haverhill	Oct. 15, 1920	54
1870	†Marble, John Oliver	Worcester	Dec. 9, 1920	81
1876	†Mather, Edward Elias	Williamstown	May 22, 1921	77
1886	McCarthy, Charles Daniel	Malden	June 22, 1920	59
1897	McCarthy, Charles Florence	Winchester	May 19, 1921	51
1883	Messer, Charles Carson	Turners Falls	May 20, 1920	66
1893	Milot, Alphonse François	Taunton	Nov. 6, 1920	58
1891	Miner, Worthington Warner	Ware	Dec. 19, 1920	73
1885	Morgan, John	Hadlyme, Conn	Aug. 28, 1920	75
1878	†Morong, Arthur Bennett	Boston	May 3, 1921	71
1889	Morris, John Gavin	South Boston	April 14, 1921	65
1895	Peck, Ablert Fred	Spencer	March 31, 1921	58
1897	Plummer, Frank Joseph	Roxbury	Dec. 2, 1920	64
1872	†Quint, Norman Perkins	Boston	July 27, 1920	73
1880	Robbins, Elliott Daniel	Boston	Dec. 13, 1920	64
1892	Ruppel, Emil Carl Fraser	Lynn	Oct. 10, 1920	61
1885	Schofield, Walter W	Dalton	July 6, 1920	66
1897	Sears, Harry Edward	Beverly	Oct. 20, 1920	50
1919	Settle, Howard Edwin	Boston	Dec. 20, 1920	29
1885	Smith, Hiram Fred Markley	Orange	Oct. 10, 1918	59
1879	Squier, Angelo Orin	Springfield	Nov. 25 1920	66
1869	Stevens, Andrew Jackson	Malden	Feb. 23, 1921	74

Admitted.	Name.	Place of Death.	Date of Death.	Age.
1883	Sullivan, James Edmund	Providence, R. I.	Oct. 8, 1920	63
1911	Thomas, Charles Hoft	Cambridge	Sept. 4, 1920	70
1899	Thorn, Edwin Cyrus	Deerfield	Nov. 12, 1920	45
1874	Whitney, Willliam Fiske	Boston	March 4, 1921	70

Total, 54 Deaths

† Retired Fellow.

OFFICERS OF THE MASSACHUSETTS MEDICAL SOCIETY ELECTED MAY 31, 1921.

President: John W. Bartol, 3 Chestnut Street, Boston.
Vice-President: Brace W. Paddock, 7 North Street, Pittsfield.
Secretary: Walter L. Burrage, 42 Eliot Street, Jamaica Plain.
Treasurer: Arthur K. Stone, Auburn Street, Framingham Center.
Librarian: Edwin H. Brigham, 8 The Fenway, Boston.

STANDING COMMITTEES FOR 1921-1922.

OF ARRANGEMENTS.
Donald Macomber, A. W. Reggio, J. B. Swift, K. G. Percy, F. J. Callanan, Dwight O'Hara.

ON PUBLICATIONS AND SCIENTIFIC PAPERS.
E. W. Taylor, R. B. Osgood, F. T. Lord, R. M. Green, A. C. Getchell.

ON MEMBERSHIP AND FINANCE.
S. B. Woodward, A. Coolidge, Jr., Samuel Crowell, Gilman Osgood, Homer Gage.

ON ETHICS AND DISCIPLINE.
Henry Jackson, T. J. Robinson, David Cheever, F. W. Anthony, R. H. Seelye.

ON MEDICAL EDUCATION AND MEDICAL DIPLOMAS.
C. F. Painter, J. F. Burnham, A. G. Howard, R. L. De Normandie, H. P. Stevens.

ON STATE AND NATIONAL LEGISLATION.
J. W. Bartol, F. G. Wheatley, E. H. Stevens, F. E. Jones, J. S. Stone.

ON PUBLIC HEALTH.
E. H. Bigelow, Annie L. Hamilton, E. F. Cody, Victor Safford, R. I. Lee.

PRESIDENTS OF DISTRICT MEDICAL SOCIETIES.

Vice-Presidents (*Ex-officiis*).

Arranged according to seniority of fellowship in The Massachusetts Medical Society.

E. H. Bigelow	Middlesex South
A. J. Halpin	Middlesex North
A. I. Connell	Bristol South
F. B. Lund	Suffolk
J. J. Goodwin	Worcester
C. D. Knowlton	Norfolk
R. B. Rand	Plymouth
G. F. Dow	Middlesex East
F. E. Jones	Norfolk South
R. S. Ely	Worcester North
Sumner Coolidge	Bristol North
P. P. Johnson	Essex South
F. W. Snow	Essex North
C. P. Curley	Barnstable
G. L. Gabler	Hampden
J. A. Mather	Franklin
G. H. Thompson	Berkshire
A. J. Bonneville	Hampshire

COUNCILORS 1921–1922.

ELECTED BY THE DISTRICT MEDICAL SOCIETIES AT THEIR ANNUAL MEETINGS, APRIL 15 TO MAY 15, 1921, AND COUNCILORS UNDER THE TERMS OF THE BY-LAWS.

NOTE.—The initials M. N. C., following the name of a councilor, indicate that he is a member of the Nominating Committee. V.P. indicates that a member is a councilor by virtue of his office as president of a district society, and so vice-president of the general society. C. indicates that he is chairman of a Standing Committee. Ex-P. indicates ex-President.

BARNSTABLE,
C. P. Curley, Provincetown, V.P.
E. F. Curry, Sagamore.
J. P. Nickerson, West Harwich, M.N.C.

BERKSHIRE,
G. H. Thompson, North Adams, V.P.
Henry Colt, Pittsfield.
A. P. Merrill, Pittsfield.
B. W. Paddock, V.P. Pittsfield.
P. J. Sullivan, Dalton, M.N.C.

BRISTOL NORTH,
Sumner Coolidge, Middleborough, V.P.
W. H. Allen, Mansfield.
F. A. Hubbard, Taunton, M.N.C.
H. G. Ripley, Taunton.

BRISTOL SOUTH,
A. I. Connell, Fall River, V.P.
A. W. Buck, Fall River.
E. F. Cody, New Bedford, M.N.C.
A. B. Cushman, South Dartmouth.
W. A. Dolan, Fall River.
R. W. Jackson, Fall River.
A. H. Mandell, New Bedford.
J. C. Pothier, New Bedford.

ESSEX NORTH,
F. W. Snow, Newburyport. V.P.
R. V. Baketel, Methuen.
J. F. Burnham, Lawrence.
I. J. Clarke, Haverhill.
T. R. Healy, Newburyport, M.N.C.
G. E. Kurth, Lawrence.
J. J. O'Sullivan, Lawrence.
F. B. Pierce, Haverhill.
F. E. Sweetsir, Merrimac.
R. L. Toppan, Newburyport.

ESSEX SOUTH,
P. P. Johnson, Beverly, V.P.
S. P. F. Cook, Gloucester.
J. F. Donaldson, Salem.
H. K. Foster, Peabody.
W. T. Hopkins, Lynn.
J. F. Jordan, Peabody.
G. M. Kline, Beverley.
S. W. Mooring, Gloucester.
E. S. O'Keefe, Lynn.
W. G. Phippen, Salem, M.N.C.
A. N. Sargent Salem.
R. E. Stone, Beverly.

FRANKLIN,
J. A. Mather, Greenfield, V.P.
H. G. Stetson, Greenfield, M.N.C.
C. L. Upton, Shelburne Falls.

HAMPDEN,
G. L. Gabler, Holyoke, V.P.
F. H. Allen, Holyoke.
T. S. Bacon, Springfield.
E. P. Bagg, Jr., Holyoke, M.N.C.
M. D. Chisholm, Westfield.
G. B. Corcoran, West Springfield.
P. M. Cort, Springfield.
Philip Kilroy, Springfield.
E. A. Knowlton, Holyoke.
P. M. Lynch, Springfield.
L. E. Mannix, Chicopee Falls.
H. C. Martin, Springfield.
J. H. Quinn, Springfield.
J. M. Tracy, Springfield.

HAMPSHIRE,
A. J. Bonneville, Hatfield, V.P.
O. W. Cobb, Easthampton, M.N.C.
J. E. Hayes, Northampton.
H. B. Perry, Northampton.
D. M. Ryan, Ware.

MIDDLESEX EAST,
G. F. Dow, Reading, V.P.
L. M. Crosby, Wakefield.
E. D. Richmond, Reading.
C. L. Sopher, Wakefield, M.N.C.
F. T. Woodbury, Wakefield.

MIDDLESEX NORTH,
A. J. Halpin, Lowell, V.P.
W. B. Jackson. Lowell.
J. H. Lambert, Lowell.
G. A. Leahey, Lowell.
J. A. Mehan, Lowell.
M. A. Tighe, Lowell.
E. J. Welch, Lowell, M.N.C.

MIDDLESEX SOUTH,
E. H. Bigelow, Framingham, V.P., C.
E. A. Andrews, Newton.
G. A. Bancroft, Natick.
E. W. Barron, Malden.
C. O. Chase, Watertown.
Richard Collins, Waltham.
F. G. Curtis, Newton.
C. A. Dennett, Arlington.
D. C. Dow, Cambridge.
John Duff, Charlestown.
W. E. Fernald, Waverley.
G. W. Gay, Chestnut Hill, Ex.-P.
F. J. Goodridge, Cambridge.
L. S. Hapgood, Cambridge.
C. E. Hills, Natick.
F. R. Jouett, Cambridge.
H. J. Keaney, Everett.
C. E. Mongan, Somerville.
C. F. Painter, Newton, C.
H. S. Rowen, Brighton.
W. D. Ruston, Somerville.
L. F. Sise, Medford.
F. G. Smith, Somerville.
C. H. Staples, Malden.
E. H. Stevens, Cambridge, M.N.C.
A. K. Stone, Framingham Center, Treas.
F. R. Stubbs, Newton.
Fresenius Van Nüys, Weston.
H. P. Walcott, Cambridge, Ex-P.
G. L. West, Newton.
W. S. Whittemore, Cambridge.
Alfred Worcester, Waltham, Ex-P.

NORFOLK,
C. D. Knowlton, Roxbury, V.P.
C. E. Allard, Dorchester.
W. B. Batchelder, Dorchester.
E. H. Baxter, Hyde Park.
D. N. Blakely, Brookline.
E. J. Brearton, Dorchester.
E. H. Brigham, Brookline, Libra.
J. P. Broderick, West Roxbury.
A. N. Broughton, Jamaica Plain, M.N.C.

NORFOLK (*continued*),
W. L. Burrage, Jamaica Plain, Sec'y.
J. A. Ceconi, Dorchester.
T. F. Greene, Roxbury.
W. H. Greene, Roxbury.
W. A. Griffin, Sharon.
R. W. Hastings, Brookline.
F. C. Jillson, West Roxbury.
G. W. Kaan, Brookline.
W. B. Keeler, Roxbury.
Bradford Kent, Dorchester.
F. P. McCarthy, Milton.
M. V. Pierce, Milton.
H. H. Powers, Brookline.
Victor Safford. Jamaica Plain.
G. H. Scott, Roxbury.
C. F. Stack, Hyde Park.
Max Sturnick, Dorchester.
Augusta G. Williams, Brookline.

NORFOLK SOUTH,
F. E. Jones, Quincy, V.P.
C. S. Adams, Wollaston.
O. H. Howe, Cohasset.
G. H. Ryder, Quincy, M.N.C.
G. M. Sheahan, Quincy.

PLYMOUTH,
R. B. Rand, North Abington, V.P.
W. C. Keith, Brockton.
C. E. Lovell, Whitman.
Gilman Osgood, Rockland.
F. J. Ripley, Brockton.
F. G. Wheatley, North Abington, M.N.C.

SUFFOLK,
F. B. Lund, Boston, V.P.
J. L. Ames, Boston.
S. H. Ayer, Boston.
J. W. Bartol, Boston, Pres., C.
Robert Bonney, East Boston.
J. T. Bottomley, Boston.
V. Y. Bowditch. Boston.
E. G. Brackett, Boston.
J. E. Briggs, Boston.
F. J. Cotton, Boston.
E. A. Crockett, Boston.
Loretta J. Cummins, Boston.
Lincoln Davis, Boston.
W. J. Gallivan, South Boston.
J. E. Goldthwait, Boston.
G. S. Hill, Boston.
W. C. Howe, Boston, M.N.C.
J. C. Hubbard, Boston.
Henry Jackson, Boston, C.
D. F. Jones, Boston.
C. H. Lawrence, Boston, C.
E. A. Locke, Boston.
F. T. Lord, Boston.
Donald Macomber, Boston, C.
B. H. Metcalf, Winthrop.
R. H. Miller, Boston.
J. J. Minot, Boston.
F. S. Newell, Boston.
E. H. Nichols, Boston.
B. W. Pond, Boston.
Edward Reynolds, Boston.
W. H. Robey, Jr. ,Boston.
Stephen Rushmore, Boston.
D. D. Scannell, Boston.
C. L. Scudder, Boston.
C. M. Smith, Boston.
Myles Standish, Boston.
J. S. Stone, Boston.
E. W. Taylor, Boston, C.
Louisa P. Tingley, Boston.
F. H. Williams, Boston.

WORCESTER,
J. J. Goodwin, Clinton, V.P.
F. H. Baker, Worcester.
W. P. Bowers, Clinton, Ex-P.

WORCESTER (*continued*),
W. J. Delahanty, Worcester.
G. A. Dix, Worcester.
G. E. Emery, Worcester.
M. F. Fallon, Worcester.
Homer Gage, Worcester.
R. W. Greene, Worcester.
David Harrower, Worcester, M.N.C.
E. L. Hunt, Worcester.
A. G. Hurd, Millbury.
W. L. Johnson, Uxbridge.
L. C. Miller, Worcester.
G. F. O'Day, Worcester.
C. B. Stevens, Worcester.
G. O. Ward, Worcester.
F. H. Washburn, Holden.
S. B. Woodward, Worcester, Ex-P., C.

WORCESTER NORTH,
R. S. Ely, Townsend, V.P.
W. E. Currier, Leominster, M.N.C.
J. G. Henry, Winchendon.
H. R. Nye, Leominster.
A. H. Quessy, Fitchburg.

CENSORS, 1921–1922.

BARNSTABLE,
J. P. Nickerson, West Harwich, Supervisor.
C. E. Harris, Hyannis.
E. E. Hawes, Hyannis.
J. H. Higgins, Marstons Mills.
E. S. Osborne, West Dennis.

BERKSHIRE,
Henry Colt, Pittsfield, Supervisor.
J. F. Crowley, Adams.
A. C. England, Pittsfield.
O. J. Brown, North Adams.
E. H. Howard, Pittsfield.

BRISTOL NORTH,
F. A. Hubbard, Taunton, Supervisor.
H. B. Baker, Taunton.
A. R. Crandell, Taunton.
T. F. Clark, Taunton.
T. J. Robinson, Taunton.

BRISTOL SOUTH,
W. A. Dolan, Fall River, Supervisor.
R. W. French, Fall River.
C. J. Leary, New Bedford.
S. V. Merritt, Fall River.
I. N. Tilden, Mattapoisett.

ESSEX NORTH,
R. V. Baketel, Methuen, Supervisor.
J. E. Bryant, Haverhill.
R. C. Hurd, Newburyport.
A. M. Hubbell, Haverhill.
F. S. Smith, North Andover.

ESSEX SOUTH,
J. F. Donaldson, Salem, Supervisor.
J. A. Shatswell, Beverly.
J. W. Trask, Lynn.
F. W. Baldwin, Danvers.
A. T. Hawes, Lynn.

FRANKLIN,
C. L. Upton, Shelburne Falls, Supervisor.
H. N. Howe, Greenfield.
Charles Moline, Sunderland.
R. H. Philbrick, Northfield.
A. L. Newton, Northfield.

HAMPDEN,
J. M. Tracy, Springfield, Supervisor.
C. H. Giroux, Three Rivers.
Frank Holyoke, Holyoke.
F. L. Everett, Springfield.
A. C. Eastman, Springfield.

HAMPSHIRE,
J. E. Hayes, Northampton, Supervisor.
F. E. Dow, Northampton.
W. J. Collins, Northampton.
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1921–1922.

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(Some of these are corrected by the returns received since the annual meetings in the spring of 1921.)

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Book Reviews.

Repressed Emotions. By ISADOR CORIAT, M.D. New York: Brentano's. 1920.

The purpose of this small volume is, apparparently, to educate the popular mind in the principles of psycho-analysis. It is readable and interesting and likely to encourage lay readers, who may be in doubt as to the value of this method, to further pursuit of the subject. Although its teachings are those of the out-and-out Freudian school, the exclusive worship of the sex instinct, which is thought by its critics to appeal loudly and dangerously to the young and inexperienced thinker, is much less in evidence than might be expected.

Through the application of psycho-analytic methods of inquiry, the author traces the influence of repressed emotions from the remotest ages of the past and finds them at the root of many of the myths and customs of primitive peoples. As showing how they pervade literature he analyzes in detail the mental condition of various characters in novels. He emphasizes the value of psycho-analysis in education, particularly that of the young, as a preventive of future neurosis. Its influence upon character-formation, religion, ethics, art, society, delinquency, etc., is also positively set forth. Finally, he credits psycho-analysis, as elaborated by Freud, with "a new psychology, a new neurology and a new school of literary criticism." Such sweeping claims are at least debatable and, as regards neurology, far from the fact. The book also treats, rather largely and somewhat technically, on the treatments of functional nervous disorders regarding which certain dogmatic statements are made which may be misleading. It is asserted, for example, that "psycho-analysis can alone cure a neurosis," and the implication is made that it is the beall and end-all of the therapy of such disorders. This dictum can hardly be reconciled with the opinion of authoritative advocates of this method to the effect that, even if it were possible, there is no reason for undertaking it in the majority of cases as they can be cured in much shorter ways.

ACKNOWLEDGMENT.

To the local members of the profession and its kind friends who so generously contributed their automobiles for the entertainment of the visiting Fellows of the American Medical Association at its recent session, and thereby added so much to the enjoyment and success of the meeting, the Committee on Transportation, of the Entertainment Committee, wishes to acknowledge its deep sense of appreciation and thanks.

LINCOLN DAVIS, *Chairman,*
GEORGE A. LELAND, JR., *Secretary.*

THE BOSTON
Medical and Surgical Journal
Established in 1828

THURSDAY, JUNE 30, 1921

Published by The Massachusetts Medical Society under the jurisdiction of the following-named committee:

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SUBSCRIPTION TERMS: *$6.00 per year, in advance, postage paid for the United States, $7.56 per year for all foreign countries belonging to the Postal Union*

Material for early publication should be received not later than noon on Saturday. Orders for reprints must be sent to the printer with galley proof of paper. Upon written request, authors will be furnished free one hundred eight-page reprints, without covers, or the equivalent in pages in articles of greater length.

The Journal does not hold itself responsible for statements made by any contributor.

Communications should be addressed to The Boston Medical and Surgical Journal, 126 Massachusetts Ave., Boston, Mass.

ANNUAL MEETING OF THE A. C. AND C. ASSOCIATION.

The American Climalogical and Clinical Association held its annual meeting at Lenox, June 3 and 4, under the leadership of President Carroll E. Edson of Denver. Dr. A. K. Storer is Secretary and Treasurer, and Dr. Cleveland Floyd is Recorder.

The papers read were of wide scope and value. Subjects presented were:

1. Occult Tuberculosis.
H. R. M. LANDIS, Philadelphia, Pa.
2. Hyperthyroidism and Tuberculosis.
PHILIP K. BROWN, San Francisco, Cal.
3. Subdiaphragmatic Inflammatory Conditions, Especially those Simulating Chest Conditions.
ROGER I. LEE, Cambridge, Mass.
4. A Study of Patients, Especially Asthmatics, with reference to Endocrine Dysfunctioning.
JAY PERKINS, Providence, R. I.
5. Discussion: The Management of Dyspnoea.
Dyspnoea due to Diseases of the Circulatory System.
R. H. BABCOCK, Chicago, Ill.
Dyspnoea due to Diseases of the Respiratory Organs.
G. W. NORRIS, Philadelphia, Pa.
Dyspnoea from Renal and Toxic Origins.
J. A. LICHTY, Pittsburgh, Pa.
By invitation the discussion was opened by
CHARLES H. HOOVER, M.D., Cleveland, Ohio.
6. Outdoor Schools. J. W. BRANNAN, New York.
7. Monitor Ventilation.
W. A. GRIFFIN, Sharon, Mass.
8. The Value of Vital Capacity Determinations in the Diagnosis of Myocardial Insufficiency.
J. H. PRATT, Boston, Mass.
9. Analysis of Eighty Cases of Functional Disease in Soldiers. J. M. SWAN, Rochester, N. Y.
10. Lyon Method of Draining the Biliary System for Diagnosis and Treatment.
F. J. DEVER, Bethlehem, Pa.
11. An Epidemic of Scarlet Fever with Interesting Complications.
DAVID R. LYMAN, Wallingford, Conn.
12. Extensive Rib Resection in the Treatment of Pulmonary Tuberculosis: Report of four cases.
D. C. PARFITT, Gravenhurst, Can.
13. Influence of Periapical Dental Infection upon the Leucocytes.
JUDSON DALAND, Philadelphia, Pa.
14. Pneumonia.
C. E. QUIMBY and JOHN McCABE, New York.
15. The Heart Muscle Changes in Pneumonia.
W. J. STONE, Pasadena, Cal.
16. Nathan Strong, Jr. A pioneer in the early history of Epidemic Cerebro-Spinal Meningitis.
W. R. STEINER, Hartford, Conn.
17. Three Cases of Artificial Pneumothorax (a) Bronchiectasis; (b) Pulmonary Abscess and Hemorrhage; (c) Acute Tuberculosis Pneumonia.
C. H. JOHNSON, Grand Rapids, Mich.
18. The Prevailing Beliefs about Infection in Tuberculosis. E. R. BALDWIN, Saranac Lake, N. Y.
19. A Case of Tuberculosis of the Spinal Cord. Lantern Slides.
C. C. BROWNING, Los Angeles, Cal.
20. X-ray Studies in Postural Rest.
G. B. WEBB, Colorado Springs, Colo.
21. Chaulmoogra Oil Derivatives in the Treatment of Pulmonary Tuberculosis.
P. K. BROWN and E. L. WALKER, San Francisco, Cal.
22. Tuberculosis of Husband and Wife.
H. L. BARNES, Wallum Lake, R. I.
23. Anti-tuberculosis Work in Canada.
G. D. PORTER, Toronto, Canada.
24. Tuberculosis Problem in Ex-Service Men.
J. O. COBB, Staten Island, N. Y.
25. Brehmer and His Teachings.
H. M. KINGHORN, Saranac Lake, N. Y.
26. Lymphoblastoma of the Stomach.
STERLING RUFFIN, Washington, D. C.
27. Group Practice.
GORDON WILSON, Baltimore, Md.

Anyone wishing especial information relative to these subjects can communicate with the authors. Dr. Floyd presents an abstract of one paper as follows:

STUDIES OF THYROID DYSFUNCTIONING WITH SPECIAL REFERENCE TO ASTHMA.

Dr. Perkins showed charts of patients representing the nerve symptoms which one finds in asthma, and demonstrated that the same line of symptoms, except for the difficult breathing, is found in patients complaining of so-called "nervousness," in some functional heart disease, in some cases of tuberculosis, in some cases of bronchitis and in all cases of asthma, and in practically all of the cases presenting these symptoms there is present a dysfunctioning of the thyroid gland. He cited numerous cases

under the various headings showing the similarity in the history, and considered that the evidence warranted the conclusions that the various conditions noted were due to one and the same cause, usually thyroid dysfunctioning.

In asthma he considers that primarily the disease, especially as found in children, is due to hyperthyroidism, and that the disease can be cured in children. In asthma there is a vicious circle. The thyroid secretion increases the patient's nervousness and the nervousness increases the action of the thyroid. If this circle can be broken and the regular rest treatment simulated, the disease can be cured, and this is best done by giving sedative treatment such as small doses of apomorphine hydrochloride (Crystalline), tincture of hyoscyamus and tincture of valerian. This must be continued for a long time. In older people, where the thyroid has been over-active for many years, a condition is found frequently where the asthmatic attacks have ceased, but the patient is still disabled because of secondary functional or organic disturbances which still persist even though the original cause is removed. The same is true of these patients when treated. The asthmatic condition can be cured, but the secondary effects cannot wholly be removed.

He stated that in his opinion, while proteids and odors can bring on attacks of asthma, these merely act as excitants, and are not the real cause. Treating cases on the basis that the thyroid is the organ involved, not only do the asthmatic paroxysms disappear even in cases where they were brought on by proteids or odors, but other unpleasant manifestations brought on by proteids, such as indigestion or nausea, also disappear.

HAVERHILL TUBERCULOSIS ASSOCIATION.

Communities which are showing interest in health problems are urged to observe the work done by the Haverhill Tuberculosis Association, for this organization is one of the most progressive in the state.

The results obtained in that city are due in a great degree to medical direction and oversight, acting in close co-operation with the City Board of Health. The people of Haverhill have endorsed the work done in a liberal way.

The hospital for tuberculosis patients is a model of its kind and the situation is ideal.

The Association has felt that one great difficulty in the early recognition of tuberculosis has been lack of painstaking care in the early study of doubtful cases, and in order to assist physicians has prepared a simple history card for the physician's use on which may be recorded all essential facts relating to a suspected or recognized case.

The value of such a card lies in keeping before the doctor suggestions of the details of the essential investigation and a record of conditions found. These cards may be obtained at the JOURNAL office and at the medical supply stores at a cost of five cents each. All profits from the sale will be used to continue and extend the work in Haverhill.

On a following page of this issue of the JOURNAL will be found a reduced facsimile of both sides of this history card.

MEDICAL NOTES.

THE AMERICAN SOCIETY FOR THE CONTROL OF CANCER announces the death of Dr. Harry M. Sherman, Regional Director for the states of California and Nevada. Dr. Sherman had been a director of the society since its organization and had taken up the work with renewed interest at the solicitation of Dr. Powers. He had recently given much attention to organizing the work and had traveled extensively, meeting various committees in both states.

RESOLUTION.—At the recent meeting of the New York State Medical Society, the following resolution was passed:

> Be It Resolved, that the House of Delegates of the New York State Medical Society, in convention assembled at Brooklyn, New York, on May 2, 1921, does heartily endorse the efforts of the American Society for the Control of Cancer, and earnestly bespeaks the fullest coöperation of all the Branch Districts and County Societies in the State, to desseminate useful facts concerning this disease to the laity and to bring the members of the profession itself to a fuller appreciation of their responsibilities in this campaign.

The Sisters of Providence announce the opening of the new wing of St. Vincent Hospital, Worcester, Mass. This building, which has just been completed at a cost of $300,000, has fifty beds in private rooms, an operating suite of three rooms, a maternity ward, and complete pathological, chemical and X-ray laboratories. The private rooms are unusually large and the decorations and furnishings homelike.

Miscellany.

REPORT OF DEPARTMENT OF PUBLIC UTILITIES CONCERNING TELEPHONE RATES.

Petition of the Somerville Medical Society in the matter of the application to doctors of medicine, under certain circumstances, of the business classification of the New England Telephone and Telegraph Company.

This is a petition of the Somerville Medical Society objecting to doctors of medicine being included, under certain circumstances, within the business classification of the New England Telephone and Telegraph Company.

The company, in its schedule of rates, distinguishes between business and residence service, and makes a higher rate in the former case than in the latter. In its "commercial practices" it provides that "residence service rates permit the use of the service for social or domestic purposes, but do not permit extensive local use for business purposes." "The use of the service by . . . physicians . . . who have one main station only . . . is obviously primarily for business purposes," and "the advertising in any way of a station designation by any subscriber shall be considered as proper evidence that the use of the service is not primarily for social or domestic purposes." It has recently endeavored to apply these tests to physicians whose alleged primary use of their telephone service at their residences is for the pursuit of their profession. It is to this application of the classification that objection is made by the petitioners in this case.

We are not concerned, in this matter, with the difference between telephones at places of business as opposed to telephones at residences, and we do not, therefore, attempt, at the present time, to pass upon the soundness of this distinction. We are only concerned with the question of the use by doctors of medicine of telephones at their residences. The distinction which the company makes in the uses of telephones at residences is, taking their schedules and practices as a whole, one based upon the question of primary use, and the rate depends upon whether the primary use of the telephone at a residence is for business purposes, on the one hand, or for social or domestic purposes on the other. The phrases which occur in the company's "commercial practices," quoted above, beyond establishing this distinction, merely constitute presumptions or rules of evidence for the determination of the application of the test in particular cases. This was the interpretation given them at the hearing by the counsel of the company, and seems to us essentially sound. As all arguments in this case have been addressed solely to the application of this test in this particular matter, we do not regard the soundness of the distinction itself as necessarily involved in the decision of this case, and we do not, therefore, undertake to pass upon it at the present time.

The real questions before us, therefore, are whether the use made by a doctor of medicine of a telephone at his residence can ever properly be classed as a business use within the meaning of the schedules and practices of the company, and if so, when.

It is argued by the petitioners that the practice of medicine is not a business. This would undoubtedly be true if the test were the difference between business and professional use. Here, however, the contrast is between business and social or domestic use, and, as a consequence, we think the word "business" is meant to cover not only all businesses in the strictest sense of that term, but also all professions, vocations or occupations by which livelihoods are made. The underlying purpose of the classification is to enable the user of the telephone for social or domestic uses to have that service at a lower rate than the user for occupational purposes. While nobody can deny the noble and beneficent nature of the profession of medicine, it seems equally clear that nobody can deny that its practice is the method through which most doctors of medicine earn their living. So it seems to us evident that, when we endeavor to contrast occupational uses with social or domestic uses, we must include in the former term uses of the telephone at residences made in the course of the practice of medicine, however much we must recognize that many doctors of medicine are actuated in the practice of their profession not so much by the thought of pecuniary gain as by the desire to be of service to mankind.

Some emphasis has been put by the petitioners upon the fact that most of the use of doctors' telephone service is made not by the doctor calling up a patient, but by the patient seeking the advice or assistance of the doctor; or, to put it more briefly, that most of the calls are inward calls instead of outward ones. This does not seem to us to alter substantially the real nature of the transaction. It is probably true that many

commercial houses pay large rents, not so much to enable them to be in a good position to call upon their customers, as to be readily accessible themselves to the demands of those who wish to deal with them. The same is undoubtedly true of the use of the telephone by many commercial concerns. Whether the telephone is there primarily to enable the doctor to call up a patient or a nurse, or to enable a nurse or a patient or the patient's family to call up the doctor, does not change the nature of the situation. It is, in any event, all connected with and an inseparable part of the doctor's practice of his profession.

We are, therefore, constrained to hold that there may be cases where the use of telephone service by a doctor of medicine at his residence constitutes primarily an occupational use within the meaning of the classification of the company as we construe it.

The next question is, under what circumstances use of the telephone by a doctor of medicine at his residence shall be regarded as primarily an occupational use.

We do not agree with the statement made in the company's "commercial practices" that "the use of the service by . . . physicians . . . who have one main station only . . . is obviously primarily for business purposes," and we are opposed to the application of this standard as a final test.

The petitioners contend that the word "doctor" is not only a designation of an occupation, but also a title and, in many instances, an important mode of identification. The company acquiesces in this view, and is entirely content that in the future the abbreviation "Dr." may appear in the telephone directory after a doctor's name without that being taken to indicate that his use of the telephone at his residence is primarily occupational as opposed to social or domestic. We understand that hereafter the abbreviation "Dr." will be inserted after the name of any doctor who desires it, without prejudicing in the slightest degree his claim that the use of his telephone at his residence is primarily social or domestic. The company feels, however, that if he desires the word "physician" inserted after his name, that this term cannot be justified as a title or mark of identification, but must stand as a description of his occupation, and, consequently, that where this word is desired after the name the company will feel justified in treating that service as primarily occupational service. This attitude of the company was developed by suggestions from the members of the Commission during the course of the hearings. It seems to us a reasonable one, and is, accordingly, adopted by us as the expression of the views of this Department, also, in this matter.

This leaves the situation, then, in this shape: A doctor of medicine who desires the word "physician" inserted after his name may be treated by the company as having definitely stated that the use of the telephone at his residence is primarily for occupational purposes. A doctor of medicine, on the other hand, who does not desire the word "physician" inserted after his name, but is content with the insertion of the abbreviation "Dr." thereafter, shall not be bound by the interpretation stated above, but shall pay business rates only (1) if he admits that his use of the telephone at his residence is primarily for occupational purposes, or, (2) if he does not concede this fact, but the evidence clearly indicates that this is the primary or chief use to which his telephone is being put,—which we hope will very rarely prove to be the case. Where, however, the use of his telephone at his residence is primarily for social or domestic purposes, the doctor is bound to pay only residential rates.

Very likely a number of physicians have reported their telephones one way or the other without the foregoing distinctions clearly in mind. It seems to us highly proper, therefore, that the company should base its future ratings of doctors upon such listing as may be adopted and such classification as may result therefrom in the light of this decision, and should disregard such listing and such classification of physicians at their residences as has been previously made. The company should, in brief, recanvass the situation anew.

In view of the consent of the company to comply with the foregoing views, it seems unnecessary at the present time to make any order in the premises except a formal one, and it is accordingly

Ordered, That this petition be dismissed without prejudice.

By order of the Commission,

(Signed) Andrew A. Highlands, *Secretary.*

The Index to Volume CLXXXIV of the Boston Medical and Surgical Journal, which volume ends with this issue (June 30, 1921), is being printed to go out to all subscribers so it may be used by those who desire to have their magazines bound into one volume. Anyone interested can secure a copy of this index, free, by making request for the same at the Journal office.

COMMISSION ON MILK STANDARDS.

A summary report by the Commission on Milk Standards for the nine years ending December 10, 1920, recently published by the U. S. Public Health Service, contains matters of much interest to health officers and to chemists and bacteriologists.

Standard whole milk, says the report, should contain not less than 8.5 percent milk solids, not fat, and 3.25 percent milk fat; standard skim milk not less than 8.75 percent of milk solids; standard cream not less than 18 percent milk fat, and be free from all constituents foreign to normal milk.

The Commission believes that it is necessary to permit standardized and adjusted milk; this despite the fact that it recognizes the ease with which milk is contaminated and the difficulty of so controlling standardizing, skimming, homogenizing, souring, etc., as to prevent contamination and the use of inferior materials. The manipulation of the milk, however, should be controlled; the product should be labeled "adjusted milk" (the label showing the minimum guaranteed percent of fat); and the milk should comply with the sanitary and chemical requirements of unmodified milk.

To meet conditions in cities where milk contains less than 8.5 percent solids, not fat, milk sellers should be permitted to choose whether they will sell under the regular standard or under a guaranteed statement of composition. The sale of any normal milk should be permitted if its percent of fat is stated. If this is not stated, the sale should be held to be unlawful unless the milk contains 3.25 percent milk fat. Dealers selling under the guarantee plan should be required to state the guarantee conspicuously on all milk containers.

The number of bacteria in milk depend on dirt, temperature and age. Specific disease bacteria are not often present, and the difficulty of detecting them by laboratory methods renders these of little value in guarding milk against specific disease. The only practical safeguard is by medical, veterinary, and sanitary inspection and by pasteurization.

Bacterial counts indicate the safety and the "decency" of milk. Small numbers of bacteria indicate fresh milk, produced under clean conditions and kept cool; large numbers indicate dirty, warm, or stale milk.

Bacteria in milk are related to infant mortality. Children fed on milk containing few bacteria show a lower death rate than those fed on milk containing many. Bacteria harmless to adults may cause infant diarrhœa; and milk containing large numbers is apt to contain species capable of setting up intestinal inflammation in infants.

The interests of public health demand that the production and distribution of milk should include frequent bacterial laboratory examinations. In making the counts the methods of the American Public Health Association Laboratory Section should be used. To meet the charges often made that pasteurization is used to cover up careless or filthy methods, milk should be required to measure up to standard both before and after pasteurization.

Extensive study justifies the conclusion that bacterial analyses of duplicate samples of milk by routine methods in different laboratories vary about 28 percent. Tests of five samples will give fairly accurate results and will always permit any milk to be accurately graded. At least four of the five should show fewer bacteria than the maximum allowed for the grade awarded. Grading should never be based on a single sample.

The Commission on Milk Standards, which was established in March, 1911, by the New York Milk Committee, a voluntary organization, consists, at the present time, of seven public health officials, six bacteriologists, four chemists, and two agricultural experts. Fourteen have been physicians, three have long practical experience in the milk industry, and six have been connected with the production and control of certified milk.

RESOLUTIONS BY THE AMERICAN MEDICAL EDITORS' ASSOCIATION.

The following resolutions were passed at the 52nd annual meeting of the American Medical Editors' Association, June 7th, and the Secretary was authorized to send you a copy for publication:

WHEREAS: The medical restrictions of the Volstead Act, together with its various administrative and other interpretations and rules and regulations and enforcements, etc., constitute, in some of their effects, indictment of the medical profession and harrassment of the medical practitioner and the sick, and are obstacles to free pursuit of honest medical judgment and therapeutics, and have reacted to the detriment of society and the public health and are opposed to public policy;

AND WHEREAS: Some of these restrictions and

rules and regulations and interpretations, etc., are not based upon concensus of medical experience and practice and established usage;

And whereas: It is apparent that they have not been framed and interpreted and administered with full appreciation of all matters involved;

And whereas: The precedent established by the Volstead Act in restricting medical practice should, if physicians value their therapeutic liberty, be met with a protest that will command attention;

And whereas: The point at issue is the right of the physician to select his remedies, and to decide what doses of these remedies each patient requires;

And whereas: This issue in no wise affects and has nothing to do with propaganda either for or against prohibition, but is purely a matter of preserving the necessary rights of the physician in the interests of public health and public policy:

Be it therefore resolved: That the American Medical Editors' Association protests against further undue regulation of therapeutic procedure by statutes or by administrative interpretation or regulation;

And be it resolved: That the Association requests of the proper authorities a review and revision of such existing statutes or rules or regulations as may be unduly restrictive of the therapeutic judgment and procedure of physicians.

We ask this for the preservation of the necessary rights of the medical profession and in the name of public welfare and wise public policy.

NARCOTIC REGISTRANTS.

Collector of Internal Revenue John J. Mitchell has issued the last call to narcotic registrants who are due to file returns on or before July 1st. This means that all doctors, dentists, or druggists who wish to continue handling or prescribing narcotic drugs for the period July 1, 1921, to June 30, 1922, must file returns immediately to avoid the addition of a penalty.

Absolutely no extension of time will be granted narcotic registrants. In case of late filing a 25% penalty will be attached. If this is a second offense, the delinquent will also be held liable to a specific penalty in addition to the first.

The regular meeting of the New England Association for Physical Therapeutics was held on Tuesday, June 28th, at eight o'clock at the Hotel Victoria, 271 Dartmouth Street, Boston. The subject of the evening was "The Employment of Physical Auxiliaries to Increase the Efficiency of X-ray Therapy," by Drs. deKraft and Titus, of New York City.

Correspondence.

HOSPITAL AND DISPENSARY CLINICS A BANE TO THE GENERAL PRACTITIONER.

June 16, 1921.

Mr. Editor:—

I would like to call the attention of the profession to the further encroachments of the various hospitals and dispensaries of Boston on the practice of the medical men of Boston and vicinity.

It appears that all classes are welcome, particularly the well-to-do, in practically all the clinics of the city. The Peter Bent Brigham keeps open all day so as not to miss any patients that would be coming to the common doctors of Roxbury.

Now the Boston Dispensary is running a thriving clinic at night for the "poor" who have to work during the day. Most of these cases are veneral, men and women who are perfectly able to pay; but this institution appears to be so hungry for patients that they have no thought about the injury they do to the profession.

Most of the hospitals, and the Boston Dispensary, employ "social workers" who act as "runners" for the various institutions. Whether to hold their easy, lucrative positions, or otherwise, I cannot judge, but they offer the prospective patients the greatest specialists in the world, free, at their respective clinics. One of these young women even offered one of my patients two quarts of milk daily if she would bring her family and herself to the Boston Dispensary to be examined by the "experts" there.

Whether they are taught to or not, I do not know, but there is a movement among social workers, school nurses and others to divert all people who need medical services to the dispensaries and hospitals. Patronize and pauperize is the slogan.

The medical men who practice medicine as an avocation (wealthy men) who do not know the need of a dollar, are the ones to blame for the present situation. In their eagerness to have a clinic to practice on, they do not consider those whom they injure.

There are enough people in Greater Boston who need medical attention to keep every physician in our district busy were it not for the dispensaries and hospital clinics. As the late lamented Dr. Brooks truthfully said, all of the dispensaries and most of the hospital clinics could be closed with great benefit to the people as a whole.

In going through a large hospital a few days ago, I was struck with the large number of patients who should be at home, treated by their family physician, whose convalescence could be materially shortened by home surroundings and better medical attention; and a sad thing to say is that a number of these same patients were sent in by our brethren, who should know better.

There is a law in Massachusetts which gives an injured employee the right to go to any physician he chooses. Not one employee in a hundred knows of such a law, and when a man is injured he thinks that he must go to the cheap dispensary or hospital that his employer indicates. As a result, thousands of dollars are lost to the profession weekly.

The Somerville Medical Society (not the Massachusetts Medical Society) has taken this matter up, and I expect something will be done.

The Massachusetts Medical Society could remedy the abuses which are committed by the leaders of the profession, but, unfortunately, the officers of the Society have not of late interested themselves in the welfare of the general practitioner.

I may mention the telephone "increase" hearing, which was so successfully won by the Somerville Society. I did not hear anyone at the hearing representing the Massachusetts Medical Society. Who will say that the hearing should not have been asked for

and conducted by the Massachusetts Medical Society?

Medical men can help, with benefit to themselves and their patients, by treating their cases at home or in "open" hospitals where the family doctor has control of his patient. Many of our best men have ruined their practice by sending patients to public hospitals to have the patients' ills diagnosed by immature house officers.

The remedy is partly up to the family doctor himself. He should see that material is not supplied to hospitals and dispensaries. If concerted action was taken by the profession, I am sure the growing hospital and dispensary nuisance could be considerably abated.

CHARLES MALONE, M.D.

46 St. John Street,
Jamaica Plain, Mass.

NOTICES.

AMERICAN PSYCHIATRIC SOCIETY.—At the seventy-seventh meeting of the American Medico-Pathological Association, held in Boston, May 31, to June 3, inclusive, a new constitution was adopted which provided, among other slight changes, a change in name of the organization, which will hereafter be known as the American Psychiatric Association.

The publication, *American Journal of Insanity*, Johns Hopkins Press, Baltimore, Md., will, hereafter, be the official organ of the Association and will be published under a new name, *The American Journal of Psychiatry*, while the former transactions bound in book form, will be omitted. The newly elected officers are: Albert M. Barrett, M.D., President, Ann Arbor, Mich.; H. W. Mitchell, M.D., Vice-President, Warren, Pa.; C. Floyd Haviland, M.D., Secretary-Treasurer, Middletown, Conn.

RESOLUTION UNANIMOUSLY ADOPTED BY THE SOMERVILLE MEDICAL SOCIETY AT A MEETING HELD JUNE 24, 1921.—*Resolved:* That the Somerville Medical Society by a unanimous vote enthusiastically supports and endorses the formation of a Mutual Insurance Society in the Massachusetts Medical Society as advocated in the BOSTON MEDICAL AND SURGICAL JOURNAL, and that the Secretary of the Somerville Medical Society notify its members to attend any and all meetings that may be held for the formation of such insurance organization.

M. W. WHITE, *President*,
EDMUND H. ROBBINS, *Secretary*.

PULMONARY TUBERCULOSIS HISTORY CARD.

Date ..... 192 ..... Age

Res. ..... Occup. ..... Nat. .....

F. ..... M.

B. ..... S. .....

Hist. cough in G. P's. Uns. or Aunts .....

P. H. Prolong. Cough ..... Expect., Amt. etc.

Hemop. ..... Pleurisy ..... Eff. ..... Pneum. .....

Bronch. ..... La Grippe ..... Typhoid .....

Fistula. ..... Malaria ..... Measles. .....

Enlarg. glands. ..... Oth. dis. ..... Operat. or inju. .....

As a Child—strong robust,—slim wiry—delicate, P. I. Syphilis Menst.

Began ..... with ..... Stop. work .....

Cough ..... Exp. Amt. etc. ..... Strength .....

App. ..... Digest. ..... Bowels ..... Sweats .....

Hoarseness. ..... Sleep. ..... Dyspn.

REVERSE SIDE.

P. E. Gen App. Ht. ..... { Max. ..... Norm. ..... Pres. ..... Loss of ..... lbs.

P. T. R. Teeth. ..... Wt.

M. Memb. ..... Thro't. ..... Fing. .....

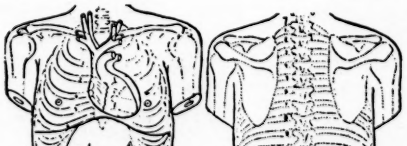
Ht. Apex. ..... Mur's. .....

Ap. outlines ..... Dep. above Clav. .....

Hgb. ..... Thyroid ..... Complic. .....

Diag. ..... Sput. .....

(Cough and Long Breath) Treat.



Stage Prog.
Incip. Favor
Mod ad. Doubt
Far. ad. Unfav.

See JOURNAL, page 711.

Current Literature Department

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NEUROLOGY.

INFLUENZA AND HYPOPHRENIA.

MENNMYER, K. A. (*Jour. A. M. A.*, Oct. 10, 1920) writes on the interrelation of an acute epidemic infection and a chronic endemic (brain) affection and concludes that:

1. The usual effect of influenza on the brain is not the production or precipitation of hypophrenia, and, if it ever produces hypophrenia it is probably by means of a more or less obvious encephalopathy.

2. On the other hand, of those already manifesting mental lack, certainly a few are influenced adversely by influenza, and the symptoms of hypophrenia aggravated, an aggravation which may be predominantly in the intellectual sphere, in the emotional sphere or in the volitional sphere.

3. Psychoses of an indeterminate type are occasionally precipitated by influenza in the feebleminded, even as in normal persons.

4. At least occasionally, though rarely, the effect of influenza on hypophrenia may be symptomatic amelioration. [E. H. R.]

GYNECOLOGY.

JOINT DISCUSSION ON THE TREATMENT OF UTERINE FIBROIDS.

KNOX (*Brit. Med. Jour.*, Oct. 9, 1920), discussing the radium treatment of fibroids, gives the contraindications of such treatment by x-ray or radium as follows:

1. It is obvious that if a large portion of the fibroid has become converted into calcareous matter, and if the tumor is of large size, x-rays can have no beneficial effect. In doubtful cases a radiographic examination will reveal the extent of the degenerative change.

2. Most forms of degeneration should be excluded before x-rays are administered, though, if not very extensive, the treatment may be tried.

3. Malignant disease of the uterus calls for very careful consideration. Operative measures should be discussed. If it is impossible to remove the tumor, then there is no objection to a combined attack on the disease by x-rays and radium. Very careful application of radium tubes is necessary, and for this a general anesthetic is indicated.

4. Infective conditions of the uterus complicating fibroids.

5. Suppurative salpingitis or pelvic peritonitis.

6. Inflammatory conditions of other organs in the vicinity—namely, appendicitis, cystitis—should be dealt with before attempting to treat the fibroid.

7. Submucous pedunculated fibroids.

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He presents the advantages and disadvantages of x-ray treatment as follows:

Advantages.

1. The treatment is quite painless and any ill effects are quite temporary.
2. The patient can live her ordinary life, merely arranging for one or two days' rest after each treatment.
3. No elaborate preparations are required.
4. The resulting menopause is not usually attended by such severe nervous disturbances as those following operation.
5. In patients whose general health is much impaired, the recovery is rapid when the hemorrhage is arrested; moreover, the shock so often inseparable from hysterectomy is entirely obviated.

Disadvantages.

1. It takes a considerable time to effect a result —treatments may have to be given at intervals for some months.
2. The treatment is not invariably successful.
3. The tumor, though as a rule much reduced in size, does not entirely disappear.
4. Treatment may cause unfavorable changes in the blood. [J. B. H.]

MEDICINE.

Radium in the Treatment of Malignant Tumors of the Nose and Throat. Its Use and Possible Abuse.

Sonnenshein, R. (*Jour. A. M. A.*, Sept. 25, 1920).

1. The future of radium therapy seems very bright, particularly in reference to applications in tumors of the nose and throat; but great caution is advisable in statements regarding actual cures. It is important to watch for recurrences during a period of from two to five years.
2. In reporting cases, authors should give details of the preparation used, the method of application, duration of exposure, etc., in radium treatments.
3. Following up the cases and reporting on them again whenever possible is of the utmost importance in the formulation of definite conclusions regarding radium treatment.
4. Radium is probably of great value before, and certainly after operations. It is very efficient in relieving pain, hemorrhage, discharge, etc., in many inoperable cases.
5. Sarcomata are especially responsive to radiation; the carcinomata yield much less readily, and the squamous type of epithelioma is scarcely amenable to radium at all.
6. Complications, at least those reported, are not so frequent as one would be likely to expect. Burns were the most common ones, but even death may result from toxemia.
7. Radium has many advantages as compared with roentgen rays, especially for application in the nose and throat.
8. The diagnosis of the malignant cases should be made by a competent laryngologist, and the radium

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applied either by him or in coöperation with a radiologist. Only in this way will correct statistics and reliable results be obtained, with greatest benefit to the patient and the safest guidance to the profession.

]E. H. R.[

THE EFFECTS OF RADIUM TREATMENT ON WAR INJURIES IN THE NEIGHBORHOOD OF NERVES.

STEVENSON, W. C. (*Brit. Med. Jour.*, June 26, 1920), presenting the various cases illustrative of the effects of radium in war injuries in the neighborhood of nerves, summarizes his work as follows:

1. Radium treatment cannot benefit gross nerve lesions; here operative treatment is indicated to unite severed nerves or free them from dense scar tissue.

2. After a nerve operation, or after milder degrees of nerve trauma, it would appear to aid to hasten the return of function to a limb.

3. It improves the nutrition in the area supplied by injured nerves.

4. It may be useful as an aid to diagnosis, and in certain cases will indicate or contraindicate the necessity of operation.

5. It is a valuable adjunct to other forms of treatment. [J. B. H.]

THE LABYRINTHINE REACTIONS OF EXPERIENCED AVIATORS.

RANKEN (*Brit. Med. Jour.*, June 26, 1920) discusses the labyrinthine reactions of experienced aviators with the following conclusions:

1 Experienced pilots have, if anything, a slight tendency toward diminished labyrinthine reactions.

2. Disturbance, present or past, of some other system of the body may affect labyrinthine reactions.

3. Where deafness is present, no medical examination of a candidate or pilot is complete without a careful investigation of the functions and reactions of the semicircular canals of both sides.

4. In the absence of a discovery of present or past signs or symptoms pointing to an aural affection, routine examination by means of the Barany tests is superfluous,provided that a thorough general examination is made. [J. B. H.]

THE PRACTICAL APPLICATION OF VACCINE PROPHYLAXIS AND TREATMENT.

LOWE, E. C. (*The Practitioner*, October, 1920) is an enthusiastic believer in the value of vaccine therapy in the prophylaxis of acute catarrh conditions which are most common during the winter. He believes that vaccines will do good if they are of the right kind but that they are capable of doing harm also.

He is of the opinion that vaccine therapy will, in the future, occupy a much more prominent place in clinical, pathological work than it does at present.

[J. B. H.]

NUTRITION INSTITUTE AT ROCHESTER, N. Y.

Through the interest of members of the Board of Education who had visited the nutrition clinics in Chicago, an institute was organized by Dr. William R. P. Emerson, under the auspices of the Tuberculosis Association of Rochester and Monroe County. Representatives were invited from twenty-six tuberculosis associations and from the child helping organizations of Syracuse, Utica and Albany. One hundred students, including 20 physicians, were in attendance,, requiring morning and afternoon sessions. The examination of children showed 36% malnourished in one of the most well-to-do sections and only 23% in a school of children from poorer homes of foreign families. Dr. James A. Murphy, chief medical inspector for Washington, D. C.; Dr. Joseph C. Palmer, medical inspector, Syracuse, N. Y., and Miss M. Grace Osborne, executive secretary of the National Tuberculosis Association, were present for the course, as well as Professor John R. Murlin, director of the Department of Vital Economics, University of Rochester and late director of the Division of Food and Nutrition, Medical Department, U. S. A. Dr. Murphy reported on studies in Washington, showing a larger percentage of malnutrition among white than among colored children in that city.

Chicago. The regular Fall institute for western students was held at Chicago in connection with the Elizabeth McCormick Memorial Fund, November 1 to 13. A new departure was the establishing of nutrition classes in two of the largest orphanages in the city. In one of these institutions the percentage of malnutrition has been reduced by means of nutrition classes from 22 to 4. Eight classes were organized in the Francis W. Parker School, one of the most important experimental and demonstration schools in America.

Milwaukee. Dr. Emerson also spoke at the Health Center of the Wisconsin Anti-Tuberculosis Association, which is the active headquarters of social work for the entire state.

Fort Wayne. On invitation of the Board of Education, a conference was held with the school authorities and a public meeting for parents and workers in child-helping organizations. Plans are under way for holding a nutrition institute in the city later, or for sending a large

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group of workers to attend the next institute to be held in Chicago.

Dayton. A city-wide nutrition campaign is being planned for. Work has already begun, under the auspices of the National Cash Register Company among its 7,000 employees. Meetings were held on November 16, 17 and 18, with various groups and other social organizations.

TUBERCULOSIS IN BOSTON AND MASSACHUSETTS.

At a meeting of the Boston Tuberculosis Association held recently in Boston, interesting addresses were given by a number of physicians. Colonel Bushnell, who directed tuberculosis work in the Army during the war, emphasized the need of educating mothers to protect their children from receiving infections from the germ of tuberculosis. The tuberculin skin test shows that practically every adult has experienced a tuberculous infection at some time, although seventy per cent. of the population are not aware of it and have never shown any clinical evidence of it. In the campaign against tuberculosis, a great deal can be done by concentrating attention on children, especially upon those shown by the skin test recently to have become infected with tuberculosis, in order that their early infections may not become seriously important in adult life.

The future plans of the Association were outlined by Dr. George S. C. Badger, president of the Association. Dr. Cleaveland Floyd, of the Bacteriological Department of the Harvard Medical School, is to study experimentally the problems of infection of eating utensils; nurses are to be appointed to make observations on patients in various hospitals from the time when the diagnosis of tuberculosis is made to the time when the patients have been transferred to special hospitals; and the Association will make every effort to make itself useful to all Boston physicians and to the public in general in matters pertaining to the care and treatment of tuberculosis patients.

An interesting address was delivered by the Secretary of the Association, Seymour H. Stone, who said in part:

"There has been a steady and rapid decline in the death rate from tuberculosis in our city ever since Dr. Koch discovered the germ in 1882, with the one marked exception of the period during which we were engaged in the

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Great War, when the rate made a decidedly upward stride. Last year the deaths from tuberculosis, all forms, in Boston, were 1,367, or a rate of 18.29 per 10,000 inhabitants. This is a jump from a death rate of 13 plus per 10,000 inhabitants in the year 1915. This year, however, the year after the signing of the armistice, there has been a decided decline, the rate going down to 15.34 and the deaths from the disease to 1,147.

"The latest developments in the campaign have been along the lines of promoting general public health as a means of building up resistance, as, for instance, nursing in all its branches, —visiting, public health, factory, maternity, baby and school work. Improvement in the work of the health departments has contributed much. The attention paid to the examination of school children, the establishment of dental clinics, nutrition clinics and improvements in the child-labor laws and factory conditions have aided the campaign.

"Perhaps the next step will be to accept the recommendation of the National Tuberculosis Association and the United States Surgeon General that general hospitals should admit tuberculosis patients. One might add to this the recommendation that all dispensaries examine for tuberculosis. This plan, if carried out, would provide for those patients who do not wish to go to a hospital or dispensary designed exclusively for the tuberculous.

"The following named officers and council of the Boston Tuberculosis Association were elected for the ensuing year: President, Dr. George S. C. Badger; vice-president, Dr. James J. Minot; treasurer, George S. Mumford; clerk, Miss Isabel F. Hyams; council, Henry Abrahams, Dr. George S. C. Badger, Dr. Walter C. Bailey, Miss Mary Beard, Dr. Vincent Y. Bowditch, Thomas Brennan, Dr. Arthur N. Broughton, Mrs. Arthur T. Cabot, Dr. Herbert C. Clapp, James N. Clark, Dr. Randall Clifford, Miss Catherine A. Codman, Mrs. Ernest A. Codman, Mrs. Charles A. Cummings, Dr. Robert D. Curtis, Mrs. William Faxon, Dr. Cleaveland Floyd, Dr. John B. Hawes, 2d, Maurice B. Hexter, Stephen W. Holmes, Miss Isabel F. Hyams, Dr. Elliott P. Joslin, Dr. Eugene R. Kelley, Horatio A. Lamb, Dr. George N. Lapham, Rt. Rev. William Lawrence, Dr. Harry Linenthal, Miss Ida Mason, Rev. P. J. McCormack, Dr. James J. Minot, George S. Mumford, Mrs. John C. Munro, Dr. Timothy J. Murphy, Dr. John F. O'Brien, Dr. Edward O. Otis, Robert Treat Paine, William H. Pear, Miss Julia C. Prendergast, Miss Lilian V. Robbinson, Robert Saltonstall, Henry L. Shattuck, Mrs. Channing C. Simmons, Dr. Arthur K Stone, Mrs. Frederic M. Stone, Dr. Fritz B. Talbot,, Dr. Henry B. Walcott, Dr. Nathaniel K. Wood, Dr. William C. Woodward, Arthur V. Woodworth and Dr. Wade Wright.

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PATHOLOGY.

STUDIES IN EXPERIMENTAL PNEUMONIA.

BEATY, F. G., AND CECIL, R. L. (*Jour. Exp. Med.*, October, 1920) state that:

1. Pneumonia has been consistently produced in normal monkeys by intratracheal injection of Streptococcus hemolyticus.
2. The pneumonia produced has been shown to be comparable with hemolytic streptococcus pneumonia in man with respect to its clinical features, complications, and pathology.
3. Two pathologic types of the disease have occurred, interstitial pneumonia and confluent lobular pneumonia. Both types have been found in the same animal.
4. The type of pneumonia has appeared to be dependent upon the amount of streptococcus culture injected, interstitial pneumonia following the injection of small amounts and being an expression of considerable resistance, confluent lobar pneumonia following the injection of large amounts and being an expression of comparative lack of resistance.
5. Study of the distribution of streptococci in the lungs and of the character of the lesions in early stages of the disease has shown that streptococci may primarily invade the pulmonary tissue by penetration of the walls of the larger bronchial branches and that they are distributed from the points of invasion by way of the peribronchial, perivascular and septal interstitial tissue and lymphatics. Infection of the alveoli is likewise primarily an interstitial invasion of the alveolar walls by streptococci.
6. In one experiment it was found that preliminary injury to the respiratory tract by gassing with chlorine and that lowering of resistance by a preceding intraperitoneal injection of Bacillus influenzae without local injury to the respiratory tract greatly facilitated invasion of the lungs by Streptococcus hemolyticus.
7. A normal monkey inoculated in the nose and throat with Streptococcus hemolyticus failed to develop pneumonia and showed no evidence of infection of the upper respiratory tract.

They draw the following conclusions:

1. Streptococcus hemolyticus can produce a primary pneumonia in monkeys when injected intratracheally in sufficiently large amounts.
2. It readily produces an extensive secondary pneumonia in monkeys when injected intratracheally in small amounts.
3. Invasion of the lungs by Streptococcus hemolyticus in streptococcus pneumonia in monkeys is primarily by way of the interstitial framework of the lung and its lymphatics, and the disease does not appear to be primarily an infection of the terminal bronchioles.
4. Although it seems probable that invasion of the lungs by Streptococcus hemolyticus in streptococcus pneumonia in man may be by the same paths it is unsafe to draw this conclusion without qualification, since streptococcus pneumonia in man commonly occurs only as a secondary infection in the presence of a preceding inflammatory bronchitis.

[E. H. R.]

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MEDICINE.

CLINICAL OBSERVATIONS ON THE DIGITALIS-LIKE ACTION OF SQUILL.

WHITE, L. D., ET AL. (*Jour. A. M. A.*, Oct. 9, 1920) draw the following conclusions from their work:

1. The digitalis-like action of squill has been studied in 14 patients with heart disease, complicated by auricular fibrillation in 13 cases and by auricular flutter in one case.

2. The two definite clinical signs of digitalis action are the production of heart block and the lowering of the T-wave of the electrocardiogram.

2. Heart block was produced in this series by the standardized tincture of squill only in large dosage.

4. The T-wave of the electrocardiogram was flattened or inverted by large doses of squill, similarly as by digitalis.

5. No diuresis occurred even with large doses of the standardized tincture of squill, except in two cases of edema after the pulse rate had been reduced and the circulation improved.

6. Toxic symptoms were very rare, even with the largest doses.

7. With the reduction in pulse rate (and diuresis) there was subjective improvement in some of the cases.

8. Finally, the conclusion is justified that squill does have a definite digitalis-like action, but only in larger dose than that now stated as an average, *e. g.*, from 2 to 4 drams (8 to 16 c.c.) instead of 15 minims (1 c.c.) of the tincture at each dose.

BLOOD CONCENTRATION CHANGES IN INFLUENZA, WITH SUGGESTIONS FOR TREATMENT.

UNDERHILL, F. P., AND RINGER, M. (*Jour. A. M. A.*, Dec. 4, 1920) draw the following conclusions from their work:

Pathologically, influenza and acute phosgen poisoning present strikingly similar effects on the respiratory tissue. In each, pulmonary edema is a prominent feature.

In acute phosgen poisoning death is due to a marked change in the concentration of the blood. Extreme blood concentration is incompatible with life.

In influenza, the blood becomes greatly concentrated. This constitutes a factor of the greatest importance in the fatal outcome.

Pathologically and physiologically, then, influenza and acute phosgen poisoning bear striking resemblances.

A method of treatment evolved for acute phosgen poisoning has been applied with success in a few cases of influenza. The method consists in the maintenance, under carefully controlled conditions, of blood concentration as near the normal level as possible by venesection and fluid introduction.

Changes in blood concentration in influenza, followed by hemoglobin estimations, allow the grouping of cases into those demanding the prescribed treatment immediately, and those that either do not need this type of treatment at once or do not need it at all.

By following blood concentration changes, prognostication is greatly aided. [E. H. R.]

Miscellany.

RÉSUMÉ OF COMMUNICABLE DISEASES.

OCTOBER, 1920.

GENERAL PREVALENCE.

For the month of October, 1920, 5,208 cases of communicable disease were reported, as compared with 3,965 cases for September, 1920.

Anterior Poliomyelitis. In October there were 190 reported cases of poliomyelitis compared with 274 for September. The September deaths were 48, making 82 deaths up to October 1, with 399 cases to the same date, a fatality of 20.5%.

The highest weekly incidence for the entire epidemic was for the week ending October 2, with 72 reported cases. After that, there was a gradual decrease each week, with only 34 cases reported for the week ending October 30—about one-half the incidence prevailing at the beginning of the month.

Appended diagram comparing the case reports by weeks during 1916 and 1920 shows an almost identical seasonal prevalence in these two outbreaks with the 1920 epidemic running about one-third as many cases as occurred during the corresponding weeks of 1916.

Dr. Lyon and Dr. Hassman, who have been employed from the Staff of the Harvard Infantile Paralysis Commission to do early diagnostic consultation work, have seen 50 cases (Dr. Lyon, 42; Dr. Hassman, 8). They are classified as follows:

Late Paralytic: 8—no punctures
Early Paralytic: 13 with 8 punctures
Preparalytic: 10 with 9 punctures
Not Polio.: 19 with 8 punctures

The early paralytic cases were those that, when seen, either showed very slight paralysis that had escaped the attention of the physician or were cases that had developed some paralysis in the interim since they were last seen.

A follow-up study is being made of the outcome of the early paralytic and preparalytic cases. Other points are also being covered. Since the total number is so small it will be possible to draw inferences and not conclusions from the study.

Information as to the exact onsets of all the early cases is being gathered in order accurately to establish the original focus of infection.

Chicken Pox—There was an increase in this disease, 323 cases being reported as compared with 61 last month, 10 were adults and 30 of unknown age. The proportion of adults is normal, but at this time with mild smallpox in at least one bordering state, this point is being watched.

Diphtheria—With 745 cases the disease showed an increase over last month, when 415 cases were reported. This increase was in part in Fall River, New Bedford, Quincy, Greenfield, Montague, Franklin, Haverhill and Malden. Districts 1, 3 and 7 had the highest incidence per 100,000 population, their rates for October being 328, 276 and 251 respectively (annual basis).

Epidemic Cerebrospinal Meningitis. With the passing of the anterior poliomyelitis epidemic the cases of this disease fell from 24 in September to 12 for the current month, which is really a low incidence for the season.

Malaria. Reported cases, 7; total for year to date, 55. Very few positive diagnoses of this disease are ever made in our laboratory. Two or three positives

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out of about a hundred examinations is a fair annual estimate. Queries: (1) Are our typhoids and certain obscure conditions being called malaria? (2) Does a total of 55 cases justify consideration of this question?

Measles increased from 207 cases in September to 714 cases in October. Marked increase in the reported cases in Newton was noted. The explanation was that the Health Department had exercised its prerogative and proper duty in searching out cases wherever located without awaiting reports from physicians or householders. In this way, though reported cases may be comparatively higher, such a campaign will probably result in actually much less of the disease and a lessened death rate.

Lobar Pneumonia. Reported cases 220 for October and 122 for September. In 1919 the figures were 240 and 142 respectively.

Scarlet Fever. The increase since August has continued, the cases reported being 213 for August, 287 for September and 543 for October.

Pulmonary Tuberculosis. Five hundred and eighty-seven cases were reported.

Typhoid Fever. Reported cases, 127, as compared with 200 last month and 154 in October, 1919. Districts 1, 3 and 7 had the highest incidence with 96, 50 and 53 cases, respectively, per 100,000 (annual basis).

Whooping Cough. A decrease from 529 last month to 291 for October.

Influenza. Forty-one cases this month and 39 last.

RARE DISEASES.

Anterior Poliomyelitis was reported from Barnstable, 1; Fall River, 2; Taunton, 1; West Tisbury, 1; Braintree, 1; Boston, 30; Brockton, 3; Brookline, 3; Cambridge, 15; Dedham, 3; Franklin, 2; Hingham, 1; Holbrook, 1; Hopkinton, 1; Hull, 1; Marlborough, 2; Marshfield, 1; Milton, 1; Natick, 1; Needham, 1; Newton, 2; Norwell, 1; Norwood, 1; Quincy, 1; Rockland, 2; Walpole, 1; Wellesley, 2; Whitman, 1; Beverly, 1; Chelsea, 1; Danvers, 1; Everett, 2; Georgetown, 1; Gloucester, 3; Haverhill, 17; Lynn, 5; Manchester, 1; Marblehead, 1; Melrose, 3; Middletown, 1; Nahant, 1; Newburyport, 1; Peabody, 1; Reading, 2; Revere, 5; Salem, 1; Saugus, 1; Swampscott, 1; Andover, 4; Belmont, 1; Concord, 3; Lawrence, 5; Lowell, 7; Medford, 7; Methuen, 1; Somerville, 5; Waltham, 8; Watertown, 1; Wilmington, 1; Winchester, 2, Athol, 2; Clinton, 1; Dana, 1; Dudley, 1; Grafton, 1; Southboro, 1; Winchendon, 1; Worcester, 2; Springfield, 1; New Marlborough, 1; total 190.

Anthrax was reported from Lowell, 1; Peabody, 1; total, 2.

Dog-bite was reported from Lowell, 2; Somerset, 1; Winthrop, 1; total, 4.

Epidemic Cerebrospinal Meningitis was reported from Belmont, 1; Boston, 2; Fall River, 1; Hamilton, 1; Lynn, 1; Marblehead, 1; Newton, 1; Salem, 2; Somerville, 1; total, 11.

Leprosy was reported from Lowell, 1.

Malaria was reported from Boston, 4; Fall River, 1; Lawrence, 1; Lowell, 1; total, 7.

Pellagra was reported from Danvers, 1; Worcester, 1; total, 2.

Septic Sore Throat was reported from Chelsea, 1; Lowell, 1; Newburyport, 1; Northampton, 1; Warwick, 1; total, 5.

Tetanus was reported from Chicopee, 1; Revere, 1; Shirley, 1; total, 3.

Trachoma was reported from Boston, 3; Everett, 2; Lawrence, 1; Lynn, 1; Malden, 2; total, 9.

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MEDICINE.

PLEURAL SPIROCHAETOSIS.

MASON, V. R. (*Johns Hopkins Hosp. Bull.*, December, 1920) describes an interesting case of pleural spirochaetosis and discusses the recent literature of this comparatively rare condition. The acute type begins generally with fever, malaise, headache, pain in the chest and cough. It cannot be distinguished at this stage from a common acute bronchitis. Soon, however, the sputum becomes blood-streaked and frequently frank hemorrhages occur. By the time the blood has made its appearance, spirochaetes are usually abundant in the expectorations. In the milder cases symptoms may practically disappear without treatment, in others, however, improvement occurs only after the institution of arsenical therapy.

The patient usually consults a physician on account of the recurring bloody expectoration. The symptomology resembles closely that in tuberculosis and a correct diagnosis is reached only after a careful examination of the sputum as demonstrated by the presence of spirochaetes. Salvarsan or neosalvarsan in moderate doses promptly and effectively relieves symptoms and brings about a complete cure.

[J. B. H.]

HYDROCEPHALUS IN CHRONDRODYSTROPHY.

DANDY, W. E. (*Johns Hopkins Hosp. Bull.*, January, 1921) discusses the interesting group of cases of hydrocephalus in chrondrodystrophy and summarizes his conclusions as follows:

1. The large head in our cases of chondrodystrophy has been shown by ventrivulography to be due to hydrocephalus. The large heads of other recorded cases presumably have a similar cause.
2. Hydrocephalus in achondroplasia differs from other types of hydrocephalus in that its development tends to cease spontaneously. In some instances, at least in the two cases here reported, it progressed very slowly and for a long period before arrest eventually took place.
3. When untreated, a defective brain, it would seem, inevitably results.
4. We have had no opportunity to observe the progression of hydrocephalus, but it may be possible, by the newer methods of intracranial study, to ascertain the cause and possibly avert the disastrous sequelae.
5. The size of the head and, therefore, the grade of hydrocephalus seems to be proportionate to the severity of the dwarf phenomena in chondrodystrophy.

[J. B. H.]

PATHOLOGY.

EXPERIMENTAL SYPHILIS IN THE RABBIT.

BROWN, W. H. AND PEARCE, L. (*Jour. Exp. Med.*, October, 1920) present two very thorough and exceptionally well-illustrated articles on this subject. Their general summary is as follows:

From the study of a large number of rabbits with generalized cutaneous syphilis following local inocu-

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lation with Treponema Pallidum, lesions were found most often about the hind feet and legs, the head, the front feet and legs, and the tail. There was further evidence of a selective distribution of cutaneous lesions in the fact that, on a given part of the body, the lesions were usually confined to a few restricted areas. About the head, they occurred almost exclusively on the sides and bridge of the nose, the lids, the brows, the lips, and the base of the free portions of the ears. On the front feet and legs, the seat of predilection was the extensor and lateral surfaces of the fore arm, the carpus, and the feet, while on the posterior extremities they were situated upon the dorsum and lateral surfaces of the feet and ankles from the level of the tendo Achillis to the base of the fifth toe. The positions of greatest frequency were the region of the tarsus and external malleolus, the base of the fifth metatarsal, the lateral and posterior surfaces of the heel and tendo Achillis, and the base of the fifth toe. In many instances, the positions of predilection were exposed positions or areas of skin covering bony or tendinous prominences.

It was also found that the character of the lesions differed somewhat in the various locations. The lesions of the head were mostly small circumscribed papules or processes of diffuse infiltration; on the forearms and feet, affections of this type were about equally divided with larger granulomatous masses of a chancre-like character, while on the hind feet and legs, granulomatous lesions were far more numerous than those of any other type and frequently reached a very large size.

The cutaneous eruption usually consisted of only a few lesions confined to some one part of the body, but occasionally they were more numerous and more widely distributed. In this connection, it was noted that when multiple lesions appeared in a given area at about the same time, the growth of most of them was abortive, and, as a rule, only one or two developed to any considerable size. Especial emphasis was placed upon this phenomenon of inhibition as a factor of fundamental importance in the experimental infection.

From clinical observation it was found that, as a rule, the first cutaneous eruption occurred at from two to four months after inoculation, but might occur either earlier or later, depending upon the circumstances in the individual case. The earliest eruptions appeared three weeks after inoculation and the latest, two years and eight months, but, as a rule, the time between inoculation and the appearance of the first eruption did not exceed four to six months.

Successive crops of cutaneous lesions appeared in a number of animals, usually within the first six months after inoculation. In a few instances, however, there were repeated eruptions extending over a period of two years or more, the longest recorded period being three years and seven months.

The duration of individual lesions was found to be extremely variable, ranging from a few days in the case of macular erythema to more than two years in the case of a few granulamotous lesions. The average duration of the lesions appeared to vary somewhat with the nature of the lesion, but, on the whole, was not more than two to four months. No limits could be fixed, however, for the duration of an active skin infection as a whole.

Again, it was found that the cutaneous infection tended to pursue a periodic or relapsing course. This was seen in the mode of growth and resolution of individual lesions, the occurrence of successive periods of eruption, and the recurrence of completely healed lesions, all of which was interpreted as evidence of the essential relapsing nature of syphilitic infections.

This is a fine piece of work and of considerable value. [E. H. R.]

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MEDICINE.

A Study of Mercury Injections by Means of the Roentgen Ray.

Cole, H. N., et al. (*Jour. A. M. A.*, Dec. 4, 1920) draw the following conclusions from their work:

1. The absorption of "insoluble" mercury preparations from intramuscular injections can be followed admirably by roentgen ray shadows. The method is not applicable to soluble preparations.

2. An extensive study of clinical cases gave the following as the time when absorption is completed:

Mercuric salicylate: By gluteal muscles, mean, 4 days; extremes 4 to 10 days. By lumbar muscles, mean, 8½ days; extremes, 2 to beyond 24 days.

Calomel: Mean, 15 days; extremes, 4 to 39 days.

Gray oil: Unabsorbed during entire period of observation, a mean of 43 days; extremes of 16 to 125 days.

3. These findings indicate that gray oil injections are both inefficient and dangerous and their use should be abandoned.

Calomel injections are also dangerous.

Mercuric salicylate injections, especially into the gluteal muscles, give a satisfactory absorption and present relatively little danger.

We have seen a case of poisoning from gray oil injections in which none of the drug had been received for four months. Roentgen ray examination revealed large masses of metallic mercury globules.

[E. H. R.]

The Relative Usage of Narcotic Drugs in Hospital Service and Private Practice.

Blair, J. S. (*Jour. A. M. A.*, Dec. 11, 1920) offers the following recommendations which seem of distinct value:

This is a broad survey, as accurate as the nature of the problem faced has, thus far, made practicable. Permit a few recommendations.

1. There should be more and better rural hospitals.

2. Physicians whose training is defective should be aided to a higher standard of efficiency.

3. The importation and distribution of narcotic drugs for legitimate purposes should be, in my view, under the care of a government bureau; but no government should, through subsidies, etc., participate in the profits of the opium business.

4. Proper limits should be placed on the amounts imported and distributed to physicians, pharmacists, and the like, reducing the amounts through a series of years, finally reaching the actual basis of need.

5. Smuggling of narcotics should be made an offense punishable by imprisonment for not less than five years, never by a mere fine.

6. The internal revenue taxation on narcotics and dealing therein, as established in the United States, should be kept up as a necessity in tracing importations, distribution and usage.

7. Cannabis, hyoscyamus, hydrated chloral, and a few synthetic drugs should come under the narcotic control laws, and no narcotic drugs whatsoever should be permitted in proprietary preparations and products sold without prescription. Exemptions lead to abuses.

8. Drug peddling in every shape and form should be sternly met with heavy jail sentences, never by the imposition of a mere fine.

9. The so-called ambulatory reduction treatment of drug addiction is rarely of any value and should not be permitted under the laws designed to control addiction; but the drug addicts should, in some way, be hospitalized or humanely taken care of in proper institutions.

[E. H. R.]

Miscellany.

THE FORAMEN OF MAGENDIE.—The following interesting comments on the existence of the foramen of Magendie have been published in a recent issue of *The British Medical Journal:*

"The perforation in the roof of the fourth ventricle, described a century ago by Magendie, and the lateral orifices in the same structure, known variously as the foramina of Retzius, Key, or Luschka, though described in practically all textbooks of anatomy, have not always been recognized by anatomists as existing in the living subject. The existence of the median opening, Magendie's foramen, was denied by Kölliker, Cruveilhier, and others. Cannieu has been the only observer to doubt the presence of the foramina of Retzius. The critics maintained that these holes were artificially produced during dissection. Injection experiments, substantiating their existence, cannot be altogether accepted, for the roof of the fourth ventricle is so extremely fragile that if colored fluids injected are found to pass from the spinal theca to the ventricles, one cannot be certain that a rupture of the velum was not produced, especially in the cadaver. Coupin has studied the question in small mammals such as mice, rats, guinea pigs, young cats, and young rabbits. He states that in the case of rabbits, if the region of the bulb is examined immediately after death, without making any traction on the bulb or the cerebellum, the covering of the fourth ventricle appears to be perfectly continuous, but that if the examination is made several hours after death and traction is put on the cerebellum, a hole comparable to the foramen of Magendie is often produced. As the result of examining serial sections of the brains of the animals mentioned, he says that the foramina of Magendie and of Retzius can be shown not to exist. He fixed his specimens and subsequently decalcified the bony encasement in order to obviate *post-mortem* changes and to protect the finer structures from injury. Under such conditions the sections showed that there was no interruption of the covering either in the middle line or laterally. So far as these observations go, and they ought to be repeated, they indicate that in the smaller mammals, at any rate, there is no direct communication between the ventricular cavity and the subarachnoid spaces."

Miscellany.

VENEREAL DISEASE CONFERENCE.

A conference attended by representatives of the United States Public Health Service, State Health Departments, and of a clinic of national repute was held in Washington, D. C., on January 12, 1921, to discuss the work of venereal disease control and to propose plans for further development. The following resolutions were adopted:—

Resolved: 1. That the educational work of the venereal disease control and social hygiene movements has been sufficiently effective in developing a sympathetic and supportive public sentiment to warrant its continuation.

2. That an effort should now be made to evaluate the educational work in as exact social, psychologic, and medical terms as possible.

Resolved: That the administration of public health measures relating to venereal disease control should apply equally to both sexes.

Resolved: That health officers should give preference to education and persuasion before having recourse to legal process in connection with enforcing laws and regulations relating to venereal disease control.

Resolved: That while the United States Public Health Service and the State Boards of Health recognize their public duty to see that every victim of a contagious disease received adequate treatment for his own and the public's safety, they have no intention of supplanting effective private effort in this field.

Resolved: That there is urgent need for all physicians to recognize their responsibility to the community and the patient, in the control and the treatment of venereal disease, by themselves raising the standard of treatment. This implies that a physician who is unfamiliar with, or unprepared to employ modern methods in the management of these diseases, should not accept such cases for treatment but should refer them to some private or public physician who is properly equipped.

Resolved: That the venereal disease control movement cannot reach full effectiveness without the intelligent and sympathetic coöperation of the medical profession. This coöperation can best be obtained by:

1. The rapid extension of teaching facilities for medical students so that knowledge of the

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medical, social, and public health aspects of these diseases may be taught by actual contact with patients in the clinic under the direction of qualified teachers.

2. By making available to all physicians by means of clinics, lectures, demonstrations, and institutes, the most recent developments in medical and social knowledge of the venereal diseases.

3. By the development of state diagnostic facilities for the use of the practising physician.

Resolved: That the development and maintenance of a competent medical personnel under executive leadership in the field of venereal disease control demands training, whose duration and character is varied with the work for which preparation is sought; from six months, for the routine performance of the technical work of treatment, to three or more years for the preparation of men who are to assume the full medical and administrative responsibilities of the expert. For the purpose of such training, special post-graduate courses in association with medical schools and teaching centers providing liberal and accessible clinical material are essential. The development of such schools should be encouraged and active participation of their graduates in this work should be sought. The maintenance of an efficient personnel further requires the provision of inspiration and incentive to individual development and reward for initiative comprised in (a) adequate material equipment for laboratories and clinics; (b) adequate technical and medical assistance for the handling of routine work; (c) sufficient freedom from routine and provision of funds to make possible the conduct of research; (d) much more generous provision for the salary of personnel than is now the rule.

The continuance of public parsimony in this field will ultimately divert from the public service, into more generously rewarded lines of activity, those men whose training and capacity can redeem the work from mediocrity and the movement from futility.

Resolved: That the obligation of a public or private agency for the treatment of venereal disease does not end with the mere overcoming of a group of symptoms or the temporary control of contagiousness, but should extend throughout the course of the disease. The fact that a person has a venereal disease should not, as such, act as a bar to his admission to any hospital or institution receiving public funds. The aim of all agencies for the care of venereal diseases should be to trace out infected individuals; to carry treatment to the point of cure or arrest; to accumulate a body of records for intelligent control of the individual case, and to further scientific research; to maintain a follow-up system and to provide special diagnostic facilities; and to provide careful and repeated observation and expert advice for the individual patient throughout life.

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MEDICINE.

THE EFFECT OF DIPHTHERIA ANTITOXIN IN PREVENTING LODGMENT AND GROWTH OF THE DIPHTHERIA BACILLUS IN THE NASAL PASSAGES OF ANIMALS.

GELIEN, MOSS, AND GUTHRIE (*Johns Hopkins Hosp. Bull.*, November, 1920), as a result of their studies on the effect of diphtheria antitoxin in preventing lodgment and growth of the diphtheria bacillus in the nasal passages of animals, conclude that the subcutaneous administration of antitoxin does not prevent the lodgment and growth of *B. diphtheriae* in the nasal passage of cats, guinea pigs, and rabbits. [J. B. H.]

DIPHTHERIA BACILLUS CARRIERS.

GUTHRIE, GELIEN, AND MOSS (*Johns Hopkins Hosp. Bull.*, November, 1920), in their second communication on diphtheria bacillus carriers, conclude as follows:

1. The diphtheria bacilli present in a majority of healthy carriers are avirulent.
2. Avirulent bacilli cannot produce diphtheria.
3. We have no proof that avirulent diphtheria bacilli can acquire virulence.

For the above reasons we conclude that the carriers of avirulent diphtheria bacilli do not constitute a menace to anyone in particular or to the community as a whole and that any interference with their liberties on the grounds of their being carriers is unwarrantable and not justifiable.

This stand, of course, immediately raises the question as to what constitutes a valid test of virulence. We believe that the standard guinea pig test may be taken as a safe index of the virulence or non-virulence of diphtheria bacilli for human beings. We have a certain amount of evidence in support of this belief to be presented in a subsequent paper. It may be justifiable, and under certain conditions, advisable, to isolate carriers until the virulence of the organism present can be determined, but if the culture proves avirulent for the guinea pig, further detention of the carrier does not seem justifiable.

We realize fully the time and expense entailed in applying the guinea pig test, but think this does not equal the inconvenience to the individual and economic loss incurred by needless isolation of a carrier of avirulent bacilli.

There is urgent need of a simpler, quicker, and less expensive virulence test.

4. The carrier of virulent diphtheria bacilli occupies quite a different position from that of the carrier of avirulent bacilli. While we think that the danger from the former has, perhaps, been overestimated, we recognize the fact that diphtheria bacilli derived from him may give rise to the disease in susceptible persons. In this connection we have pointed out in a previous communication the need of a satisfactory and efficient means of ridding carriers of virulent diphtheria bacilli. [J. B. H.]

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MEDICINE.

EPIDEMIC DROPSY.

BHOWMIK AND SARKAR (*Ind. Med. Gazette*, November, 1920) report an outbreak of epidemic dropsy at Malda jail and vicinity. The characteristic feature of the diesase is edema of the lower extremities. In many cases the onset is with looseness of the bowels and gradual loss of appetite. Flatulence is common and the stools show considerable mucus mixed with fecal matter. The gums bleed easily and the patient complains of a foul taste in the mouth. The tongue is indented by the teeth, raw and irritated at the tip and edges, and coated with a yellowish white fur elsewhere. At onset, there is a burning, pricking sensation in the lower extremities. Within a week of the appearance of the edema the skin of the body assumes a coppery hue and old white scars get reddened, in some cases a petechial rash is observed. The reflexes are exaggerated in some cases, normal in others. Fever is moderate—seldom more than 103° F.—and highest in the afternoon. Dilatation of the heart, accompanied by quickened pulse, arrhythmia and bruits was observed in some of the cases. Anemia is evident as the disease progresses. The disease is communicable but requires immediate contact to transfer it from one person to another. It spreads very easily in a family or in an institution where people live under identical conditions and in close association. The infecting microörganism may be carried by food. The incubation period is about six days. [L. D. C.]

NOTES ON BLACKWATER FEVER.

GOODALL (*Brit. Med. Jour.*, Nov. 6, 1920) presents fourteen cases of blackwater fever in twelve of which malaria parasites were found. All the cases were treated with large doses of quinine and twelve recovered. He believes that malaria is the essential cause of blackwater fever, and that exposure to cold may be an important factor in determining its onset. [J. B. H.]

THE TREATMENT OF NEUROSYPHILIS BY THE INTRASPINAL ROUTE.

KEIDEL AND MOORE (*Johns Hopkins Hosp. Bull.*, November, 1920), as a result of their investigations on the treatment of syphilis in the central nervous system by the intraspinal route, come to the conclusion that:

1. Intraspinal therapy is a necessary and rational adjunct in the treatment of neurosyphilis in cases which fail to respond to routine antisyphilitic treatment.
2. The mode of action of intraspinal medication does not depend upon increased permeability of the meninges.
3. Aseptic meningitis produced by intraspinal injection of irritants may prove an untoward rather than a beneficial factor in the treatment of neurosyphilis. [J. B. H.]

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ON THE SYMPTOMS AND TREATMENT OF RAISED BLOOD PRESSURE.

POWELL, R. C. (*Practitioner*, November, 1920) discusses the symptoms and treatment of raised blood pressure. He states that blood pressure is relatively better maintained in tuberculosis than in any other wasting disease. Experience in this country would probably not agree with this statement. He emphasizes the fact that treatment should be directed, not so much to merely lowering the blood pressure, as to the amendment of any conditions that it may indicate as at fault. It is rarely, and only in incipient cases, possible materially to reduce a high blood pressure to within "normal" limits, and it is rarely wise to do more than keep it in bounds. He emphasizes the fact that a heightened pressure is compatible with many years of life under reasonably prudent conditions and that it is at the present time, perhaps, rather too pessimistically regarded. [J. B. H.]

PNEUMOCOCCUS ARTHRITIS COMPLICATING TONSILLITIS.

CORNER (*Ind. Med. Gazette*, February, 1920) reports a case of septic sore throat in a man of 52. The right tonsil was ulcerated and the larynx involved so much that for a time tracheotomy seemed imperative. Throat culture showed pneumococci only. Four days after onset of sore throat the right knee became tender and swollen, the pericardium involved, the patient feverish and delirious. The knee-joint was opened and 15 ounces of thick whitish pus obtained. Four more times the joint was drained and then washed out with iodine solution; finally, after nearly three months, the knee stopped discharging and healed. Meanwhile the patient recovered from his pericarditis and an intercurrent bronchitis. A pure culture of pneumococcus was grown from the pus obtained from the knee-joint. [L. D. C.]

EPIDEMIC ENCEPHALITIS.

STEPHEN AND BULCHANDINI (*Ind. Med. Gazette*, March, 1920) contribute a valuable paper on encephalitis lethargica, and report three cases in datail. They are inclined to believe that influenza has little or nothing to do with this disease, and that its clinical picture is quite different from Wernick's polioencephalitis superior, or polioencephalitis acuta inferior, or combinations of the two, or any known form of toxic encephalitis. In their experience encephalitis lethargica yields readily to salvarsan, the improvement in their three cases being very rapid and very striking. This suggests that the infection may be spirochetal in origin. [L. D. C.]

INTOLERANCE OF ASPIRIN.

CLYNE (*Ind. Med. Gazette*, December, 1920) reports a case of intolerance of Empirin (Burroughs, Wellcome & Company's substitute for aspirin). The patient, a tea-planter, aged 41, took a five-grain tablet for headache. Two hours later he complained of tightness in the neck and swelling of the face. There was marked edema of the neck, face, lips, eyelids and the lobes of the ears. There was an urticarial rash all over the body, more on the face and upper extremities, and macules around the neck and chest. The patient felt suffocated and the picture was alarming. After 18 hours the edema was subsiding and the rash had almost gone. Recovery was complete in three days. Pulse and temperature were normal throughout the attack and there was no suppression of urine. [L. D. C.]

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MEDICINE.

CINCHONIDINE IN MALARIA.

OLLENBACH (*Ind. Med. Gazette*, January, 1920) reports results with intramuscular injections of cinchonine bihydrochloride in 24 cases of active malaria. The injections were given deep into the deltoid. The initial dose was three grains and subsequent ones five grains. From two to four injections were given on successive days (8 to 18 grains). One case had six injections (28 grains) in 16 days. There were no untoward effects in any of the cases. Malaise and fever disappeared, appetite returned and weight was regained. It is claimed for this treatment that a few painless injections are far preferable to pints of unpleasant quinine mixture by mouth.
[L. D. C.]

ORGANOTHERAPEUTIC TREATMENT OF MALARIA.

NORONHA (*Ind. Med. Gazette*, August, 1920) experimented with a preparation named Bazogen, purporting to consist of the extract of spleen, pancreas, thyroid and adrenals, in the treatment of malaria. A drop in temperature occurred even in severe cases with this drug alone. In a case of malignant malarial fever recurred as soon as the drug was omitted. In a case of malarial cachexia, the spleen diminished a little and then enlarged again. It was not possible to determine the effects of the tablets on the parasites in the peripheral circulation in every case, but in the two cases examined, parasites were not found in the blood (taken at various intervals) after a prolonged search. The supply of the drug was limited so that a fair trial could not be given. The writer thinks that beyond a temporary check on the activities of the parasite, no special action occurs. [L. D. C.]

SODIUM HYDNOCARPATE AND SODIUM MORRHUATE IN LEPROSY.

MUIR (*Ind. Med. Gazette*, April, 1920) reports results obtained with sodium hydnocarpate and sodium morrhuate in thirteen leper asylums in India. In all 300 cases were treated—183 with hydnocarpate, 117 with morrhuate; of the 300, 179 were of the anesthetic type, 81 of the mixed type, 40 of the nodular type. *B. Lepra* was found in the nasal discharge of 50% of the cases examined—in 27% of the anesthetic cases, in 75% of the nodular and mixed cases. Injections of hydnocarpate were usually given intravenously, those of morrhuate hypodermically or intramuscularly. Of the cases treated with hydnocarpate, 72% showed improvement, 32% marked improvement; in several of the cases the lesions entirely disappeared. Of the casts treated with morrhuate, 71% were improved, 31% much improved. The best results are obtained in anesthetic cases with hydnocarpate but the veins soon become blocked so that it is then necessary to resort to morrhuate which can be given both hypodermically and intramuscularly. In nodular leprosy, morrhuate is as good as hydnocarpate and has the advantage that it may be injected in small doses into the nodules where it acts locally on the bacilli. [L. D. C.]

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MEDICINE.

RELAPSING FEVER IN TURKEY.

NEWCOMB (*Ind. Med. Gazette*, June, 1920) reports an outbreak of relapsing fever, which occurred in the spring of 1918 among workers on the Baghdad Railway in Northern Mesopotamia. During most of the epidemic the weather was excessively hot. Lice were very prevalent and mosquitoes and flies were very numerous. The whole of the headquarters was overrun with mice. In every case the spirillum of relapsing fever was shown by the microscope. The outbreak was undoubtedly due to lice; it seemed probable that infection took place not so often from bites of an infected louse, as from inoculation of a crushed louse in scratches made when the patient felt the bite. The onset was always sudden, with high fever and rapidly developing lethargy. Headache was invariably present and usually severe. The spleen was enlarged in 30% of the cases. Fever, untreated, lasted five to eight days and then fell by crisis, with great sweating. After an interval of from five to 12 days without fever, another attack occurred, similar to the first, but of shorter duration. One case had four relapses, the periods of fever becoming shorter and the intervals between attacks longer.

The disease was modified by the intravenous administration of neosalvarsan. After injection the temperature fell by crisis, usually in from 12 to 36 hours. In three cases the temperature rose again, two to four days after the neosalvarsan, but spirilla were not found in the blood. In the cases which relapsed after neosalvarsan, the relapse was much delayed (14 to 30 days). In the one case which had a second relapse after two doses of neosalvarsan, each interval was 24 days.

Prophylaxis consisted in killing the lice, which was not difficult, as lice and their eggs are easily killed by a comparatvely low degree of dry heat (55° C. for 30 minutes, or 60° C. for 15 minutes). [L. D. C.]

THE INTRAVENOUS DOSE OF QUININE IN MALARIA.

BRAHMACHARI (*Ind. Med. Gazette*, October, 1920) makes a preliminary report on the minimum curative dose of quinine in the treatment of malarial fever by the intravenous method. He reports, in detail, eight cases from which he draws the following conclusions: In recurring benign tertian infections, ten grains of quinine must be given intravenously for at least seven successive days to bring about complete sterilization. In recurring quartan infections, also, ten grains must be given for at least seven days. In one case, complete sterilization was brought about by giving the injections on the expected days of the paroxysm, and in another case by giving the injections for seven successive days. Several injections are necessary, because quinine is quickly eliminated by the kidneys and all of it may be excreted before all the parasites have been destroyed. [L. D. C.]

THE TREATMENT OF PLAGUE WITH IODINE AND CAMPHOR.

MALLANAH (*Ind. Med. Gazette*, July, 1920) reports results with a solution consisting of equal parts of tincture of iodine and a solution of camphor and thymol in equal parts. One c.c. of this fluid was

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injected directly into the bubo. It is a sterile solution and does not produce abscess. In all, 34 (unselected) cases were thus treated; in 30 of them only one injection was given. Of the 34 cases, 12 were unconscious at the time of treatment; 19 recovered, or 56%. The iodine treatment by the same physician in the same hospital during the last epidemic gave only 26% recoveries. The plague mortality in the city during the period these experiments were conducted was 83%. The writer does not claim any specific action of camphor in plague, but he believes that by stimulating the heart it prevents a certain percentage of deaths. Iodine also is not a specific, but the combination of iodine and camphor reduces mortality much more than any other known remedy. [L. D. C.]

PATHOLOGY.

The Mechanism of the Carrier State, with Special Reference to Carriers of Friedländer's Bacillus.

Bloomfield, A. L. (*Johns Hopkins Hosp. Bull.*, January, 1921) discusses the question of mechanism of the carrier state, with special reference to carriers of Friedländer's bacillus with the following conclusions.

1. Of 85 unselected individuals, 5.8% were found to be carriers of Friedländer's bacillus.

2. The carrier state persisted throughout the period of observation.

3. There was no tendency for contacts to acquire the carrier state.

4. Differential cultures showed the breeding place of the Friedländer bacilli to be the tonsil.

5. The carrier's own strain, or a foreign strain, of Friedländer's bacillus implanted upon the free surfaces of the mucous membranes, disappeared at the same rate of speed as in a non-carrier.

6. It was impossible artificially, to produce a carrier state by repeated inoculation with *B. Friedländer*.

7. The general conclusion from these observations is that the carrier state depends on a focus of diseased tissue, which affords a breeding place for the bacteria. They do not become adapted to growth on the free surfaces of the mucous membranes. [J. B. H.]

Mononuclear Leucocytosis in Reaction to Acute Infections ("Infectious Mononucleosis").

Sprunt, T. P., and Evans, F. A. (*Johns Hopkins Hosp. Bull.*, November, 1920) present the results of their investigations on mononuclear leucocytosis in reaction to acute infections and supparize their work as follows:

1. In addition to the mononuclear leucocytosis, seen commonly in children, one may encounter occasionally a mononuclear leucocytosis in adults, in reaction to acute infection.

2. The mononuclear leucocytosis in adults in reaction to acute infection is not a simple lymphocytosis, as in children, but is made up largely of pathological forms, probably all lymphoid in origin.

3 Among the cases in adults presenting a mononuclear leucocytosis of this type, there occurs a group with symptoms and signs so much alike that they may be considered provisionally as a clinical entity.

4. When first seen during the febrile period, especially in the early stages, these cases cannot be differentiated with assurance from leukemia: but the subsequent course makes the diagnosis clear.

5. The prognosis, so far as may be judged from a series of six cases, is good. [J. B. H.]

Miscellany.

RÉSUMÉ OF COMMUNICABLE DISEASES IN MASSACHUSETTS

FOR NOVEMBER, 1920.

General Prevalence.

During the month, 6,392 cases of communicable diseases were reported, as compared with 5,181 cases for October.

Anterior Poliomyelitis.—77 reported cases for November, as against 190 for October, marked the continued decline of this disease.

Chicken Pox.—There was more than twice as much chicken pox reported for November as for October. The figures were 651 and 323, respectively.

Diphtheria.—The reported incidence was 839, which exceeds any month in 1920, except January, which had 938. The October cases numbered 744.

Measles.—November, 1,647 cases; October, 714 cases. The highest number reported in any month in 1920 was 5,750 for May.

Lobar Pneumonia.—Last November, there were reported 275 cases, against 288 for November, 1920. This is, apparently, then, a normal incidence, and might be taken to indicate that influenza has not existed to any extent. The prevalence of this disease has, in the past, always affected the pneumonia statistics.

Scarlet Fever.—Some increase has occurred, with 659 cases reported.

Pulmonary Tuberculosis. — There were reported 496 new cases.

Typhoid Fever.—83 cases were reported, making a cumulative total for the year to December 1, of 898.

Whooping Cough has not increased. There were 388 reported cases. It must be remembered, however, that whooping cough is a serious disease, being, for instance, 4 to 6 times as dangerous as measles.

Rare Diseases.

Anterior Poliomyelitis was reported, from Amesbury, 1; Andover, 2; Athol, 1; Belmont, 1; Beverly, 1; Boston, 13; Brockton, 2; Cambridge, 2; Chelsea, 1; Concord, 2; Danvers, 2; Fitchburg, 1; Framingham, 1; Gloucester, 1; Groton, 1; Groveland, 1; Haverhill, 3; Lawrence, 1; Leominster, 1; Manchester, 1; Mansfield, 1; Marblehead, 1; Medfield, 1; Medford, 1; Newburyport, 7; Newton, 2; Northampton, 1; North Andover, 1; Palmer, 1; Pittsfield, 1; Plymouth, 1; Quincy, 1; Reading, 1; Salem, 2; Somerville, 1; Southboro, 1; Springfield, 2; Truro, 1; Tyngsboro, 1; Uxbridge, 1; Waltham,

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5; West Springfield, 1; Weymouth, 1; Woburn, 2. Total, 77.

Anthrax was reported, from Lowell, 1; Worcester, 1. Total, 2.

Dog-bite, requiring anti-rabic treatment, was reported, from Lowell, 1.

Dysentery was reported, from Boston, 1.

Epidemic Cerebrospinal Meningitis was reported, from Adams, 1; Brockton, 1; Fairhaven, 1; Fall River, 1; Lowell, 1; Lynn, 1; New Bedford, 1. Total, 7.

Malaria was reported, from Boston, 1; Deerfield, 1; Everett, 1; Framingham, 1; Winthrop, 1. Total, 5.

Pellagra was reported, from Newburyport, 1.

Septic Sore Throat was reported, from Boston, 2; Clinton, 1; Holyoke, 1; New Bedford, 1; Newburyport, 2; Somerville, 1; Sutton, 2. Total, 10.

Tetanus was reported, from Danvers, 1; Dennis, 1; Fall River, 1. Total, 3.

Trachoma was reported, from Cambridge, 1; Chelsea, 1; Boston, 4; Springfield, 1. Total, 7.

FOR DECEMBER, 1920.

General Prevalence.

For the month of December, 7,966 cases of communicable disease were reported, as compared with 6,352 for the preceding month.

Anterior Poliomyelitis.—The report of 31 new cases for December marked the further decline of the epidemic of this disease. In November, 77 cases were reported. The total for the year was 696, of which about 680 occurred during the epidemic period, July to December. This was the largest number of cases of this disease, reported in one year, of which we have record, except 1909, 1910 and 1916, with annual totals of 923, 845 and 1,927, respectively.

Chicken Pox.—There was an increase in the incidence of this disease, with 1,125 cases, compared with 651 for November. Confusion of smallpox with chicken pox led to a small outbreak of smallpox in one locality, involving 14 cases in December, with more likely to follow in January. During 1920, there were reported 5,357 cases of this disease.

Diphtheria.—The largest number of cases in any one month, 943, was reported in December. January, however, had 938, or almost as many. The December incidence was an increase over November of about 100 cases. On the basis of morbidity rates per 100,000, Districts 3 and 4 were not affected and were above the state morbidity rate for the month. The total for the year was 7,513 cases.

Measles.—With 1,876 cases reported, we seem

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well entered on a new epidemic of this disease, though we have just passed through a severe one, during the winter of 1919 and 1920. There were 1,647 cases for November, 714 for October, and 207 for September. In 1920, there were reported to the Department, 32,141 cases.

Lobar Pneumonia.—With winter conditions, an increase of this disease was expected in December. There were 453 reported cases for December, and 288 for November. Reporting of lobar pneumonia has not reached the maximum of efficiency. There were reported, during the year, 5,558 cases.

Scarlet Fever.—918 cases against 658 for November. The annual total was large, being 10,260.

Smallpox.—An outbreak of 14 cases occurred. The size of the outbreak was due to the fact that the disease was, at first, confused with chicken pox. Only 29 cases occurred during the entire year.

Pulmonary Tuberculosis.—622 cases were reported. There were 6,758 reported cases for 1920.

Typhoid Fever.—39 cases were reported. The year's total was 937 cases.

Whooping Cough.—562 cases were reported for December, against 383 for November. The year's total was 9,994 cases.

Rare Diseases.

Anterior Poliomyelitis was reported, from Abington, 1; Ayer, 1; Barnstable, 1; Boston, 1; Chelsea, 1; Fitchburg, 2; Gardner, 1; Groton, 1; Haverhill, 1; Lawrence, 2; Longmeadow, 1; Lowell, 1; Lynn, 1; Malden, 2; Medford, 1; Newburyport, 1; Newton, 3; Quincy, 1; Rockland, 1; Salem, 1; Somerville, 2; Southbridge, 1; Wakefield, 1; Waltham, 2. Total, 31.

Dog-bite, requiring anti-rabic treatment, was reported, from North Adams, 1.

Epidemic Cerebrospinal Meningitis was reported, from Arlington, 1; Boston, 1; Braintree, 1; Cambridge, 1; Chicopee, 1; Dedham, 1; Lynn, 1; Malden, 1; Medway, 1; New Bedford, 1; Norton, 1; Springfield, 1; Westfield, 1; Winchester, 1. Total, 14.

Pellagra was reported, from Danvers, 1.

Septic Sore Throat was reported, from Boston, 6; Brookline, 1; New Bedford, 1; Taunton, 2. Total, 10.

Smallpox was reported, from Methuen, 14.

Tetanus was reported, from Springfield, 1.

Trachoma was reported, from Boston, 2; Lawrence, 1; Medford, 1. Total, 4.

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PATHOLOGY

AN INQUIRY REGARDING THE AGE AND SEX INCIDENCE OF PERNICIOUS ANEMIA.

EASON (*Edinburgh Med. Jour.*, December, 1920), as a result of his inquiry concerning the age and sex incidence of pernicious anemia, comes to the following conclusions:

1. Authorities have, almost without exception, stated that individuals about the middle period of life were especially prone to develop pernicious anemia.

2. Hypothesis and investigations based on hypothesis, may proceed on futile lines if this view of the incidence is wrongly maintained.

3. The evidence from a large general hospital of a medical school probably in all cases misleads, unless cases of local sick from pernicious anemia alone are the basis of conclusions.

4 On this basis, Edinburgh hospitals show the largest numbers between the ages of 45 and 59.

5. The rate in these hospitals per 100,000 of the population is highest between 55 and 69.

6. The pernicious anemia death rate figures for Scotland, correspond very closely with the Edinburgh Hospital case figures.

7. Until the age of 50, the rate of incidence inclines to be higher in the female than in the male. Thereafter, the rate is definitely higher in males than in females.

8. It appears that senility is a more important etiological factor than has hitherto been generally recognized.

9. There appears to be an increased liability to pernicious anemia with advancing years. [J. B. H.]

THE ETIOLOGY OF BLACK WATER FEVER.

WRIGHT (*Ind. Med. Gazette*, May, 1920) presents a preliminary report of an elaborate study of black water fever, with many colored plates showing blood parasites. He finds that black water fever is probably endemic in the province of Coorg and that its prevalence may be coincident with the prevalence of hemoglobinuric fevers of animals. The parasite observed by him may prove to be a piroplasm in conjunction with the malarial plasmodium or a special specias of Laverania in conjunction with the known varieties of the malarial plasmodium or Laverania. There exist (1) a malarial hemoglobinuria, (2) a quinine hemoglobinuria and (3) a specific hemoglobinuria (black water fever) which may be differentiated chiefly by the degree of jaundice present with other symptoms. [L. D. C.]

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SURGERY.

THE PART OF THE PRACTITIONER IN THE TREATMENT OF THE PRE-OPERATIVE STAGE OF ENLARGED PROSTATE.

WALKER, J. W. T. (*Brit. Med. Jour.*, Jan. 15, 1921) classifies the risks which the patient suffering from an enlarged prostate undergoes, either with or without operation, as follows:

1. Gastro-intestinal risks,
2. Pulmonary risks,
3. Circulatory risks,
4. Nervous system risks,
5. Urinary risks.

These groups he discusses. He divides the patients into three types,—first, the patient with chronic retention of urine and partial renal failure, or uraemia; second, the patient with frequent micturition, difficulty, and a well-marked enlargement of the prostate, and about six ounces or eight ounces of residual urine; third, the patient who complains of a little difficulty in starting micturition, and may get up several times at night. The prostate is found to be very large and elastic. There may be little residual urine.

He emphasizes the following points in considering the question of operation for his patient:

1. Enlargement of the prostate is a progressive disease, the rate of increase of which we cannot foretell.
2. As the prostate enlarges, the patient grows older, and is less able to withstand the effect of uraemia or sepsis, or the effects of a severe operation.
3. When the symptoms become acute, much damage has already been done to the kidneys; and, although improvement may follow operation, much of the damage is permanent.
4. Some adenomatous prostates become malignant.
5. The mortality of catheter life is higher than that of prostatectomy.
6. A very large proportion of the cases of enlarged prostate treated by catheter are forced eventually to undergo operation.
7. The prognosis in such cases is much graver than if the operation had been performed without a period of catheter life.
8. A large proportion of the deaths after prostatectomy are due to the sepsis caused by pre-operative catheterization or the back pressure and renal inefficiency due to delay in submitting to operation.

[J. B. H.]

TUBERCULOSIS OF THE KIDNEY IN WOMEN.

BRADY (*Johns Hopkins Hosp. Bull.*, January, 1921) reports his results of surgical treatment in cases of tuberculosis of the kidney in women. He summarizes his paper as follows:

1. In our cases of renal tuberculosis, in 18% there has been a family history of tuberculosis.
2. In 60% of the cases of tuberculosis of the urinary tract, the lesion has been in the right kidney; in 35%, in the left kidney; and has been bilateral in four patients.

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3. Renal tuberculosis occurs most frequently between the ages of twenty and forty (71%).
4. The average duration of symptoms in our women before coming to the hospital was thirty-three months.
5. Renal tuberculosis in colored women, although not as frequent as in whites, is by no means rare.
6. In 88% of our cases, dysuria and polyuria were the first symptoms.
7. One-third of the women complained of hematuria on admission, and in eight patients "smoky urine" was the first symptom.
8. Thickening and tenderness of the portion of the ureter, palpable on vaginal examination, was present in 32% of the patients, and this sign is of great help in the early detection of cases of renal tuberculosis.
9. Of the seven patients not operated on, four are known to be dead and the other three left the hospital in a very bad condition and are probably now dead, although we have no definite information about them.
10. The three women on whom simple nephrotomies were performed all did badly.
11. The ultimate result is known in forty-two out of the sixty-seven cases in which the kidney was removed, or in 62% of the cases.
12. Seven of these forty-two patients may be classed as greatly improved and are now alive, six years after their operations; twenty-five are entirely well, with an average period of eleven years since they were discharged from the hospital. This means that 16.5% of the women of whom we have records have been greatly improved by their operations and 59.5% have been entirely cured.
13. Comparison of the results obtained when the ureter is removed with the kidney and when it is left *in situ* shows that, although the ultimate results are the same following the two methods, the post-operative sinus heals more rapidly when a nephro-ureterectomy is done, and this, therefore, seems to be the operation of choice when the patient's condition warrants a prolongation of the anesthetic.

[J. B. H.]

CARCINOMA OF THE POST-CRICOID REGION (PARS LARYNGEA PHARYNGITIS) AND UPPER END OF THE ESOPHAGUS.

TURNER, A. L. (*Edin. Med. Jour.*, December, 1920), in an article excellently illustrated with numerous plates, discusses the general subject of carcinoma of the upper end of the esophagus. He takes up the anatomy and pathology of the condition, the sex and age incidence, the duration of the disease, mode of onset and diagnosis, the signs and symptoms, and prognosis and treatment. He gives various illustrative cases. [J. B. H.]

RENAL COMPLICATIONS OF ACUTE LACUNAR TONSILLITIS.

CRONK, H. L. (*The Practitioner*, November, 1920) discusses the complications if acute lacunar tonsillitis, with numerous diagrams, charts and illustrative cases, and comes to the following conclusions:

1. Albuminuria is very common in acute lacunar tonsillitis.
2. This albuminuria is not always of the simple febrile type.
3. True febrile albuminuria does occur in some diseases, such as influenza.
4. Nephritis occurs in a small, but not negligible, number of cases of tonsillitis; it is of the latent variety with few signs.
5. The nephritis occurring in lacunar tonsillitis is similar to scarlatina in its tendency to recovery.

[J. B. H.]

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SURGERY.

DISCUSSION ON SURGICAL TREATMENT OF CANCER OF THE RECTUM.

MILES, W. E. (*Brit. Med. Jour.*, Nov. 13, 1920) discusses the operative methods of this condition and concludes as follows:

Cancer of the rectum claims 100% mortality if left to run its course untreated. If, then, the operation undertaken for its relief is followed by a high recurrence mortality, surgery will have failed in its object. The operation of choice is the radical abdomino-perineal, because it, alone, of the methods at our disposal, ensures removal of the tissues of the three zones of spread. It should be done for early cases on the principle that the most extensive operation possible, for the earliest possible case of cancer, ensures the greatest immunity from recurrence.

It should not be done in patients who, from age or other reasons, are unfitted to stand the strain of a severe surgical operation. For these, the choice lies between colostomy only and perineal excision as a palliative measure. If the latter plan be adopted, the type of perineal operation mentioned in Series IV (*vide* perineal excision) should be carried out, so as to ensure that the tissues of the lateral and lower zones of spread are effectively removed. If this be done, the majority of the recurrences, as we have seen, will occur in the tissues of the upward zone, and so, being above the level of the true pelvis, will save the patient from the misery of involvement of the sacral plexus by the growth.

In all suitable cases, however, the radical operation should be carried out, the preference should not be given to other methods purely because they are attended by a lower rate of operation mortality. We should remember that, when dealing surgically with cancer, the utility of an operation should be measured, not by a low operation mortality, but by the degree of immunity from recurrence which it confers.

TURNER, C. G., speaks of the sacro-abdominal excision. The summary of his conclusions is here given:

1. The treatment of rectal cancer can never be considered satisfactory as long as the disease is so far advanced as to necessitate operations which leave an incontinent anus.

2. Improvement can only come through much earlier diagnosis and consequent surgical treatment.

3. The thorough local removal of the growth and surrounding tissues with two and one-half inches of uninvolved bowel above and below its margins is more important than the removal of the upward path of probable cancer invasion.

4. The best operation for the majority of cases as met with today, is exploratory laparotomy with colotomy, followed by sacral excision.

LOCKHART-MUMMERY, J. P., takes up the recent advances in surgical treatment of cancer of the rectum and states his opinion as follows:

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1. The anus is sealed up before the operation field is prepared.
2. The rectum is freed from in front and from the perineum upwards.
3. The peritoneum is opened from the front of the rectum.
4. The bowel is divided with a cautery between clamps, and the end invaginated.
5. The wound is closed without drainage.

It might be supposed that the blind portion of the bowel below the colostomy would be a serious trouble. I have, however, never seen any serious trouble from this cause. Owing to the much shorter period of convalescence, and to the fact that the patients are out of bed so soon, the disability resulting from the operation is very much less than with the abdomino-perineal operation.

I think that for all ordinary cases of cancer of the rectum this, or some similar operation, should be performed, and that the abdomino-perineal operation should be reserved for cases of growth at, or above, the recto-sigmoid junction. [J. B. H.]

The Diagnosis of Acute Abdominal Crises.

Burgess, A. H. (*Brit. Med. Jour.*, Dec. 11, 1920) discusses, in a general way, the various signs and symptoms of acute abdominal conditions. He is of the opinion that surgical technique has now reached such a stage that it can be improved very little in the future. Better results in the future will depend upon early diagnosis. To bring this about is the object of his paper. [J. B. H.]

The Diagnosis of Hydatid Disease of the Lung.

Foster (*Brit. Med. Jour.*, Dec. 11, 1920) reports three cases of hydatid disease of the lungs, and calls attention to the fact that this condition will simulate almost all other lung diseases. Diagnosis must depend on the history and on x-ray evidence. [J. B. H.]

An Address on Stasis and the Prevention of Cancer.

Jordan, A. C., (*Brit. Med. Jour.*, Dec. 25, 1920) discusses, in this paper, the danger of neglected stasis and its far-reaching consequences, and outlines the means that should be taken in regard to alleviating stasis as indirectly preventing the occurrence of cancer. The summary of his advice is as follows:

I. Avoid stasis in general, with its attendant toxemia; in other words, keep the tissues healthy.

II. Avoid sources of local irritation in the alimentary tract:

(*a*) In the lips and mouth and tongue—avoid rough pipe stems, jagged teeth; abolish pyorrhea.

(*b*) In the pharynx and larynx—eliminate chronic catarrh.

(*c*) In the esophagus—swallow no large boluses of food; eat slowly; masticate thoroughly.

(*d*) In the esophagus and stomach—avoid excess of strong irritant spices (for example, mustard, pepper) and avoid extremes of heat and cold, especially in drinks.

(*e*) In the stomach and duodenum—prevent duodenal distention, pyloric spasm, and puodenal and pyloric congestion, by abolishing the ileal stasis which causes them.

(*f*) In the small intestine—present bacterial decomposition of the contents of the jejunum and ileum due to ileal stasis, by the means shortly to be described.

(*g*) In the large intestine—prevent stagnation and decomposition of solid feces in any part; combat catarrh by local and general means. [J. B. H.]

Miscellany.

RÉSUMÉ OF COMMUNICABLE DISEASES IN MASSACHUSETTS.

FOR JANUARY, 1921.

Rare Diseases.

Anterior Poliomyelitis was reported, from Athol, 1; Boston, 3; Brookline, 1; Grafton, 1; Palmer, 1; Salem, 1; Springfield, 1; Worcester, 1. Total, 10.

Dog-bite, requiring anti-rabic treatment, was reported, from North Attleboro, 1; Springfield, 1. Total, 2.

Dysentery was reported, from Boston, 1.

Epidemic Cerebrospinal Meningitis was reported, from Boston, 6; Chicopee, 1; Clarksburg, 1; Concord, 1; Lawrence, 2; Malden, 1; New Bedford, 4; Peabody, 2; Salem, 2; Westfield, 1. Total, 21.

Malaria was reported, from Boston, 1.

Pellagra was reported, from Danvers, 1.

Septic Sore Throat was reported, from Boston, 6; Brockton, 1; Cambridge, 2; Chicopee, 1; Clinton, 1; Haverhill, 1; Lawrence, 3; Leominster, 1; Lynn, 2; Lowell, 1; Newton, 2; Wakefield, 2. Total, 23.

Smallpox was reported, from Boston, 1; Methuen, 7; Tisbury, 1. Total, 9.

Trachoma was reported, from Boston, 4; West Springfield, 1; Whitman, 1. Total, 6.

FOR FEBRUARY, 1921.

General Prevalence.

Communicable disease incidence for February has remained practically the same as during January, there being 9,079 cases reported this month, as compared with 9,199 for last month.

Chicken Pox, which had gradually been increasing for several months, began to decrease slightly. In January, there were 1,454 cases, and in February, 1,349.

Diphtheria fell off 170 cases, there being 795 cases for the month, against 965 for January. This disease has been gradually increasing since September, when the lowest number of cases was reported.

Epidemic Cerebrospinal Meningitis.—13 cases were reported. An interesting feature at this time was the fact that 2 cases of this disease, occurring in recently arrived immigrants, at first resembled, in some respects, typhus fever.

Measles, with 2,325 cases, showed a slight increase.

Pneumonia, Lobar, decreased to 467 reported cases.

The Scarlet Fever situation remained unchanged, 1,192 cases being reported in February, and 1,135 in January. The disease is pretty uniformly distributed over the state.

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Pulmonary Tuberculosis.—572 cases against 546 last month.

Whooping Cough continues to increase, with 713 cases for February, against 669 for last month.

Rare Diseases.

Anterior Poliomyelitis was reported, from Boston, 2; Dennis, 1; Greenfield, 2; Leominster, 1; Lynn, 1; Newton, 1; Quincy 1; Weymouth, 1. Total, 10.

Dysentery was reported, from Plainfield, 5.

Dog-bite, requiring anti-rabic treatment, was reported, from Fall River, 3; Holyoke, 1; Lowell, 2; South Hadley, 1. Total, 7.

Epidemic Cerebrospinal Meningitis was reported, from Bourne, 1; Cambridge, 1; Chicopee, 1; Fall River, 2; Lawrence, 1; Lowell, 1; Malden, 1; Phillipston, 1; Plymouth, 1; Somerville, 1; Spencer, 1; Walpole, 1. Total, 13.

Pellagra was reported, from Danvers, 1.

Septic Sore Throat was reported, from Boston, 14; Cambridge, 1; Lawrence, 1; Lowell, 1; Lynn, 1; Newburyport, 2. Total, 20.

Smallpox was reported, from Methuen, 3.

Trachoma was reported, from Boston, 7; Chelsea, 1; Fitchburg, 1; Medford, 1. Total, 10.

Current Literature Department.

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SURGERY.

AN ADDRESS ON THE HOUR-GLASS STOMACH.

HOLLAND, C. T. (*Brit. Med. Jour.*, Jan. 1, 1921) discusses the general subject of hour-glass stomach, and summarizes his opinion as follows:

1. Hour-glass contraction from simple ulcer is a comparatively common condition—frequent in females, rare in males.
2. Its symptomatic history is a long one.
3. It is almost entirely an x-ray diagnosis.
4. It rarely ends in malignant disease—especially in females.
5. An hour-glass condition is found in a few cases, mostly in males, and with a short history, which is caused by malignant disease. Its x-ray appearances generally differ considerably from those seen in the non-malignant type, and are suggestive.
6. The experiences of a large x-ray department are strongly opposed to the theory that it is usual for cancer of the stomach to be preceeded by a simple ulcer. [J. B. H.]

SPINAL IRRIGATION IN MENINGITIS.

BRAHMACHARI (*Ind. Med. Gazette*, September, 1920) reports nine cases of epidemic cerebrospinal meningitis treated by spinal irrigation with electrargol. Lumbar puncture was made between the second and third lumbar vertebrae, and one to two ounces of cerebrospinal fluid withdrawn in the usual way. Fifteen c.c. of a dilute (1 : 10) solution of electrargol in normal saline was then introduced with a syringe. The foot of the bed was raised for two to three minutes, then lowered and the fluid allowed to run out. This procedure was repeated several times (six or seven) and finally a small amount of electrargol solution was allowed to remain inside. These irrigations were given every third or fourth day, depending upon the effect of the previous dose on the clinical symptoms. In two of the cases, each irrigation was followed by a sharp rigor. Otherwise, there were no untoward effects.

The writer considers that these cases compare very favorably with those treated with intrathecal injection of meningococcus serum or with repeated lumbar puncture. He believes that the combination of spinal irrigation with non-irritating antiseptics of the nature of collargol, or electrargol with intraspinal injection of anti-meningococcus serum after lumbar puncture, should prove valuable in the treatment of this disease. [L. D. C.]

DRAINAGE OF THE COMMON BILE DUCT THROUGH THE CYSTIC DUCT. CYSTO-CHOLEDOCHOSTOMY.

REID, M. R. (*Ann. Surg.*, April, 1921) presents the technic of this new procedure and advocates it as a routine, when possible, in the drainage of the common duct. The drainage tube is generally left in about five days. It does not heal around the tube and is an admirable way to take care of the temporary bile drainage. The procedure seems logical and valuable. [E. H. R.]

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SURGERY.

GASTROENTEROSTOMY IN ACUTE PERFORATED ULCER OF THE STOMACH AND DUODENUM.

DEAVER, J. B., AND PFUFFER, D. B. (*Ann. Surg.*, ———, 1921) present a very forceful paper on this much discussed subject. They believe that simple closure of the perforation is a much safer procedure than excision of the ulcer in these cases. They are now firm believers in primary gastroenterostomy and believe that their mortality is less rather than greater by adding this procedure. The morbidity is certainly less. The danger of infecting the lower peritoneal tissues is largely theoretical and rarely happens. [E. H. R.]

MARGINAL, GASTRO-JEJUNAL OR PEPTIC ULCER SUBSEQUENT TO GASTROENTEROSTOMY.

ERDMANN, J. F. (*Ann. Surg.*, April, 1921) calls attention to several important factors which seem of probable causative nature in this condition. In doing gastorenterostomy one should avoid the crushing of the mucosa by too tightly applied clamps and the use of Alles or Krohn forceps on the mucosa.

Several ulcers reviewed by the writer showed a syphilitic basis. A direct edge to edge apposition of the mucous membrane of the stomach and jejunum should be done rather than the usual through and through suture to all coats generally used. These suggestions would seem to be timely. [E. H. R.]

PERICARDIOTOMY FOR SUPPURATIVE PERICARDITIS.

POOL, E. H. (*Ann. of Surg.*, April. 1921) bases his excellent article on a very interesting and desperate case, complicated by empyema, but in which operation brought about a recovery. The article is extremely well illustrated and gives detailed information as to technic and after-care. The illustrative plates are of much value. A synopsis of reported cases in the literature and a bibliography are given. [E. H. R.]

A PERINEAL OPERATION FOR REMOVAL OF STONE IN THE LOWER END OF THE MALE URETER.

TOUSLEY, O. S. (*Surg., Gyn., and Obstet.*, April, 1921) describes the technic of this procedure and draws the following conclusions. He states that no conclusions can be drawn from a single case. The lesson taught by this particular case seems to be that removal of stone by the perineal route should not be attempted if (1) the stone is more than four centimeters from the bladder and (2) if it is not fixed in its position. Stone impacted at the point where the ureter joins the bladder wall is accessible per perineum unless the patient is obese. Provided a stone is successfully removed from the ureter by the perineal route, the patient may be allowed out of bed after the second day and the down-hill drainage would seem to be a decided advantage in that the cances of thick scar formation around the ureter are less. [E. H. R.]

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EXPERIMENTAL SYPHILIS IN RABBITS.

BROWN, W. H., ET AL. (*Jour. Exp. Med.*, April, 1921) continue their most admirable paper on this subject and devote separate articles to the affections of bone, cartilage, tendons, and synovial membranes. The article is beautifully illustrated by two plates of great interest and value. [E. H. R.]

ACUTE APPENDICITIS AND ACUTE APPENDICULAR OBSTRUCTION.

WILKIE, D. P. D. (*Edin. Med. Jour.*, November, 1920) comes to the following conclusions in regard to acute appendicitis and its relation to acute appendicular obstruction:

1. Primary acute inflammation and primary acute obstruction of the appendix are distinct pathological and clinical entities.

2. Complete obstruction of the lumen of the appendix near its cecal end is followed by changes which depend on the presence or absence of fecal content in its lumen; (*a*) obstruction of the empty appendix leads to mucocele; (*b*) if very little fecal matter is present, to an empyema; (*c*) if much fecal matter is present, to gangrene and perforation.

3. To recognize the obstructive cases in their early stages the state of the temperature and pulse-rate must be ignored and diagnosis based entirely on the facies and the local examination of the abdomen. [J. B. H.]

INTERNATIONAL POSTGRADUATE COURSE OF THE VIENNA FACULTY OF MEDICINE.

The following lectures will be held from June 6 to 18, 1921, from 8 to 11 A.M. and from 4 to 7 P.M., and will deal with the subject

RECENT ADVANCES IN SURGERY, ORTHOPEDICS, GYNECOLOGY AND PEDIATRICS.

Monday, June 6, from eight to ten-thirty A.M., Prof. Eiselsberg, Surgery of the Thyroid Gland; from ten-thirty to eleven, A.M., Prof. Albrecht, Pathology of the Lymphatic Glands; from four to six-thirty P.M., Prof. Salzer, Infectious Diseases in Surgery; from six-thirty to seven P.M., Prof. Russ, Bacteriology of Infectious Diseases in Surgery.

Tuesday, June 7, from eight to eleven A.M., Prof. Marburg and Prof. Ranzi, Increased intracranial pressure; from four to six-thirty P.M., Prof. Pupowac, Surgical transplantation; from six-thirty to seven P.M., Prof. Haberda, Legal Responsibility of the Surgeon.

Wednesday, June 8, from eight to nine A.M., Doz. Denk, Lung Surgery; from nine to ten A.M., Dr. Sgalitzer, Roentgen Diagnosis in Thoracic Surgery; from ten to eleven A.M., Prof. Wenckebach, Adhesive Pericarditis; from four to six-thirty P.M., Prof. Albrecht, Modern Treatment of Wounds; from six-thirty to seven P.M., Prof. Meyer, Theory of Narcosis.

Thursday, June 9, from eight to ten A.M., Prof. Pal and Prof. Heyrovsky, Cardiospasm; from ten to eleven A.M., Prof. Lotheissen, Strictures of the Esophagus; from four to six P.M., Prof. Schlesinger and Prof. Schnitzler, Intestinal Obstructions; from six to seven P.M., Prof. Kovacs, Subphrenic Abscess.

Friday, June 10, from eight to eleven A.M., Prof. Singer and Prof. Finsterer, Gastro-intestinal Hemorrhage; from four to seven P.M., Prof. Lorenz, Diseases of the Liver and of the Bile Tract; Prof. Eppinger, Diagnostic Value of Jaundice.

Saturday, June 11, from eight to eleven A.M., Prof. Ortner and Prof. Hochenegg, Appendicitis; from four to six-thirty P.M., Prof. Fraenkel, Osteomyelitis; from six-thirty to seven P.M., Prof. Erdheim, Pathological Anatomy of Rickets, Osteomalacia, and Osteoporosis.

Sunday, June 12, Excursion to the Semmering.

Monday, June 13, from eight to ten-thirty A.M., Prof. Kienböck, Roentgen Diagnosis of Diseases of the Bones and Joints; from ten-thirty to eleven A.M., Prof. Ewald, Modern Treatment of Fractures and Dislocations; from four to five P.M., Prof. Frisch, Treatment of Ununited Fractures; from five to six P.M., Doz. Demmer, Ambulatory Treatment of Fractures; from six to seven P.M., Dr. Lenk, Roentgen Treatment of Surgical Diseases.

Tuesday, June 14, from eight to eleven A.M., (Orthopedic Hospital, V, Gasserg. 44.) Professor Spitzy, Tuberculosis of the Bones and of the Joints; Prof. Spitzy, Operative Treatment of Paresis; from four to six-thirty P.M., Prof. Falta, Chronic Arthritis; from six-thirty to seven P.M., Doz. J. Bauer, Relations of Internal Secretion to the Metabolism of Calcium Salts.

Wednesday, June 15, from eight to nine A.M., Doz. Hass, Causes, Origin and Prophylaxis of Deformities; from nine to eleven A.M., Prof. Lorenz, Diseases of the Hip Joint; from four to six-thirty A.M., Prof. Thaller, Roentgen Treatment of Benign Gynecological Affections; from six-thirty to seven P.M., Prof. Weibl, Treatment of Uterine Carcinoma.

Thursday, June 16, from eight to nine A.M., Prof. Halban, Relation of Internal Secretion to Gynecology; from nine to ten A.M., Prof. Jagic, Clinical Aspects of the Climacteric; from ten to eleven A.M., Doz. Frankl, Early Diagnosis of Uterine Carcinoma;

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from four to six-thirty P.M., Prof. Latzko, Peritonitis; from six-thirty to seven P.M., Prof. Adler, Meno- and Metorrhagia.

Friday, June 17, from eight to ten-thirty A.M., Prof. Peham, The Post partem Period; from ten-thirty to eleven A.M., Prof. Hitschmann, Placneta Previa; from four to five P.M., Prof. Moll, Premature Children; from five to six P.M., Prof. Zappert, Nervous Diseases in Infants; from six to seven P.M., Prof. Friedländer, Surgery in Pediatrics.

Saturday, June 18, from eight to ten-thirty A.M., Prof. Knöpfelmacher, Vitamine Deficiency in Children; from ten-thirty to eleven A.M., Prof. Jehle, Albuminuria in Children; from four to six-thirty P.M., Prof. Schick, Infectious Diseases in Children; from six-thirty to seven P.M., Prof. Pirquet, Recent Method of Feeding Children.

Physicians who desire to take advantage of this program are invited to send their names and their addresses as soon as possible to the Editor of the *Wiener Medizinische Wochenschrift*, Wien, IX, Porzellangasse 22, and arrangements will be made for their accommodation.

There is no fee for these official lectures, which are delivered in German, but a nominal charge of 1000 crowns (about £1.50) to cover expenses. The address of the office of the postgraduate organization in Vienna is, Vienna, IX, Frankgasse 8 (Tel. 16009).

Another series of postgraduate lectures will be delivered in September, 1921, and will be particularly addressed to the general practitioner, a final series in December, 1921, will deal with the recent advances in Dermatology, Ophthalmology, Oto-, Rhino-, and Laryngology and Urology.

THE POSTGRADUATE ORGANIZATION OF THE VIENNA MEDICAL FACULTY.
Professor Haberda, M. D.

SCHOOL HEALTH IN MINNEAPOLIS. — Some points developed by the school survey, recently conducted in Minneapolis by Dr. Taliaferro Clark, of the U. S. Public Health Service, at the request of the city health authorities, seem to be of general interest.

Minneapolis is governed by "boards," among which are those on Health and on Education, whose contact in the public schools is a perennial source of friction in many cities. Minneapolis prevented this when the board of education appointed the commissioner of health to be director of school hygiene, thus assuring a thorough liason. The report recommends that this liason be extended to the health and school nursing services, thus saving a large amount of duplication in follow-up work and home visiting, and leaving a number of nurses free for detail, to work that must now be largely neglected. An increase of the nurses to one for each thousand pupils is recommended.

An increase in the number of school medical examiners to one for each 3,000 pupils is also urged. The shortage in these inspectors is forcing them largely to limit their work to finding and making mere statistical record of hampering physical defects and leaving them little time for correcting these. Lack of time for careful diagnosis is also compelling the inspectors merely to notify parents that their children should be sent to the family physician for examination.

Until enough inspectors can be employed, the time of the present force can be conserved by making physical examination for children in their first, second, and last years only: in the first, to determine what defects they may have; in the second, to see whether they are improving; and in the third, as a guide to vocational employment.

The survey shows that about two per cent. of the children of the city have some form of heart defect. Such children need especial care to increase their chances of outgrowing the trouble. Heart clinics are necessary to find these children by inspection (especially after recovery from "childish" diseases), to control their exercise and daily regimen, to advise them in regard to vocational study and work; and find and correct physical defects that hinder their recovery.

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NEUROLOGY.

RELATIVE EFFECTIVENESS OF VARIOUS FORMS OF TREATMENT IN NEUROSYPHILIS.

GLOTUS, J. H., ET AL., draw the following conclusions from their investigation (*Jour. A. M. A.*, March 12, 1921):

Without making any pretense at setting forth final conclusions in the matter, in view of the difficulty of establishing adequate controls in a clinical investigation of this type, we may state that in our experience:

1. A comparison of the findings on patients receiving spinal drainage in conjunction with arsphenamin intravenously and routine mercuralizaton, and the findings on patients receiving an equal amount of routine treatment without spinal drainage, demonstrates no superiority in favor of the drainage method.
2. The most immediate change produced by either of these methods of treatment is in the cell count.
3. A transient but marked rise, followed by a fall toward normal limits, occured in patients receiving spinal drainage, and we have reason to believe that a similar Herxheimer-like curve of pleocytosis accompanied by transient exacerbation of symptoms occurs in many patients under treatment for neurosyphilis by routine methods.
4. Temporary rise in the cell count early in the course of treatment should not, therefore, necessarily be regarded as of unfavorable prognostic significance.
5. In ten patients in whom spinal drainage had produced indifferent results, the administration of arsphenamized serum intraspinally some months later, produced what appeared to be more satisfactory and more permanent results. [E. H. R.]

SURGERY.

REMOVAL OF THE GALL-BLADDER WITHOUT DRAINAGE.

WILLIS, A. M., (*Jour. A. M. A.*, March 12, 1921) summarizes his paper as follows:

I would emphasize again that the omission of drainage after the majority of operations of cholecystectomy is a procedure that is perfectly safe, and that the results obtained by such omission are distinctly superior to those following the older method of packing or draining with gauze. This is indicated clearly, not only by my own results but also by those obtained by other surgeons, and it is my earnest hope that the omission of drainage in such cases will be more widely tried, for I am thoroughly convinced that the surgeon who makes an impartial test will become a convert. [E. H. R.]

RECONSTRUCTION OF THE HAND.

TAYLOR, R. T. (*Surg., Gyn., and Obstet.*, March, 1921) presents a most interesting article on this subject, with a new technic for repair of severed tendons. He devotes much time to a description of the tendon arrangement of the hand and the possibilities of transplantations of tendons from one finger to produce function in others and of bone transplantation in the metacarpals and phalanges. [E. H. R.]

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GYNECOLOGY.

A STUDY OF CHRONIC ENDOCERVICITIS.

MATTHEWS, H. B. (*Surg., Gyn., and Obstet.*, March, 1921) believes that this is a very common and intractable disease which has far greater possibilities in the production of pelvic disease than has heretofore been supposed. In the vast majority of cases the only hope for cure is a complete removal of the infected cervical tissue. This the author does by a cone-shaped enucleation of the cervix, described in his paper. [E. H. R.]

PELVIC ABSCESS.

MARSTON, L. R. (*Arch. of Surg.*, March, 1921) presents an exhaustive study of this disease, covering sixty-eight pages and based on a study of seven hundred and sixteen cases. He firmly advocates pelvic drainage but warns of the dangers to follow unless very great care is to be given the case post operatively. The article is an intelligent review of the pathology of this condition. [E. H. R.]

PATHOLOGY.

CANCER INFECTION.

OCHSNER, A. J. (*Ann. Surg.*, March, 1921) warns against the assumption that cancer is not an infectious disease because no organism has been constantly found to establish the infection theory. Nor does he believe that failure to transplant cancer in humans is evidence against its infectious nature. The infection in animals is already well established.

The article is suggestive and of interest. [E. H. R.]

THE RELATION OF CHRONIC FIBROSIS AND THROMBOPHLEBITIS OF THE SPLEEN TO CONDITIONS OF THE BLOOD AND LIVER.

MAYO, W. J. (*Arch. Surg.*, March, 1921) presents a most interesting and well considered article on this broad problem, and states as a general conclusion that generalized splenic phosis and thrombophlebitis are the result of many causes and the pathologic changes in the spleen, liver, and blood are regularly developed without regard to the primary etiologic factors. [E. H. R.]

STUDIES IN EXHAUSTION.

CRILE, G. W. (*Ann. Surg.*, March, 1921) reviews work done in the past on this subject by himself and his associates, especially Dolby, in reference to the changed picture in cortical cells and concludes that prolonged insomnia produces histologic lesions in the central nervous system, the lung and suprarenals, but produces no appreciable alteration in the H-ion concentration of the blood, but it does decrease the electric conductivity of the central nervous system, cerebrum, cerebellum, and spinal cord. [E. H. R.]

OBSTETRICS.

THE INTRAVENOUS USE OF CORPUS LUTEUM EXTRACT IN NAUSEA OF PREGNANCY.

HIRST, J. C. (*Jour. A. M. A.*, March 19, 1921) reports very favorable results from the intravenous use of this preparation. No untoward effects were noticed. Two c.c. were used, every other day, in mild cases, or the same dose every day in severe cases.

The presence of a goiter is an absolute contraindication to the use of this preparation. [E. H. R.]

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SURGERY.

STUDIES ON LYMPHOID ACTIVITY AND ON X-RAY EFFECTS IN EXPERIMENTAL CANCER.

NAHAHARA, W., AND MURPHY, J. B. (*Jour. Exp. Med.*, April, 1921) present their articles on this subject and draw conclusions of interest to those working along these lines. [E. H. R.]

ROENTGENOGRAPHIC STUDIES OF BRONCHIECTASIS AND LUNG ABSCESS AFTER DIRECT INJECTION OF BISMUTH MIXTURE THROUGH THE BRONCHOSCOPE.

LYNCH, H. L., AND STEWART, W. H. (*Ann. Surg.*, March 1921) present a very interesting article on this subject. They find that bismuth mixtures (8 c.c. of bismuth subcentonate in pure olive oil rendered sterile by boiling) can be injected into the bronchi and lungs of a living patient without danger. This the authors believe will open up an enormous field of usefulness in the study of cough, the expulsion of substances from the lung, and lung drainage. It will aid in localizing bronchial strictures and lung abscesses. The injection should be made slowly and not with a "squirt." The therapeutic benefit in the five cases in which the injection was used seems to have been great. No harm has been done in any case so far. The examinations by x-ray should be made as soon as bronchoscope is withdrawn.
[E. H. R.]

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OFFICIAL ORGAN of THE MASSACHUSETTS MEDICAL SOCIETY and of THE NEW ENGLAND SURGICAL SOCIETY

$5 per Annum. 25c per copy
Vol. CLXXXIV, No. 5

THURSDAY, FEBRUARY 3, 1921

Published weekly in Boston, at 126 Massachusetts Avenue

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THE NEXT ANNUAL MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY WILL BE HELD IN BOSTON, TUESDAY, MAY 31, AND WEDNESDAY, JUNE 1, 1921.

Entered at the Post-office at Boston as second-class matter.

THE BOSTON
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Published by the MASSACHUSETTS MEDICAL SOCIETY — Official Organ of the NEW ENGLAND SURGICAL SOCIETY

$6 per Annum. 25c per copy
Vol. CLXXXIV, No. 22

THURSDAY, JUNE 2, 1921

Published weekly in Boston, at 126 Massachusetts Avenue

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PRESS OF JAMAICA PRINTING COMPANY, BOSTON, MASS.

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OFFICIAL ORGAN OF THE NEW ENGLAND SURGICAL SOCIETY, AND OF THE BOSTON SURGICAL SOCIETY, INC.

per Annum. 25c per copy
ol. CLXXXIV, No. 24

THURSDAY, JUNE 16, 1921

Published weekly in Boston, at 126 Massachusetts Avenue

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Entered at the Post-office at Boston as second-class matter.